MR. KAFIN: Edward Boiteau.

THE HEARING OFFICER: Mr. Boiteau, do you have any objection to testifying under oath?

MR. BOITEAU: No, I do not.

THE HEARING OFFICER: All right. Would you raise your right hand.

EDWARD B. BOITEAU

called as a witness for and in behalf of the Project Sponsor, having been first duly sworn, was examined and testified as follows:

THE HEARING OFFICER: All right, would you be seated, give your full name and address to the Reporter.

THE WITNESS: My name is Edward B. Boiteau. My home address is 162 North Main Street in Bellingham, Massachusetts.

THE HEARING OFFICER: All right, Mr. Boiteau, I'm going to show you a copy of Exhibit 761119:59 and ask you if this constitutes a summary of your professional qualifications and background?

THE HEARING OFFICER: I'm also adding after "Bachelor" and before "in Science" "Bachelor of Science."

Mr. Boiteau, you're employed by Sasaki Associates?

THE WITNESS: That is correct.

THE HEARING OFFICER: And you participated in the preparation of the application which is the subject matter of this hearing?

THE WITNESS: I did.

THE HEARING OFFICER: All right, I'm going to receive Exhibit 761119:59 in evidence subject to cross-examination.

Now, Mr. Boiteau, according to the project sponsor's direct case set forth at length on page 126 of the transcript, you are responsible for certain pages of the project application. Were you, in fact, responsible for those -- preparation of those pages and are you prepared to testify thereon today?

THE WITNESS: Yes, I am.

THE HEARING OFFICER: All right. Do you believe that the information set forth in

those pages fairly and substantially represent your position as a representative of Sasaki Associates with reference to the subject matter expressed therein?

THE WITNESS: Yes, I do.

THE HEARING OFFICER: And would you testify substantially in accordance therewith if you were permitted to do so right now on direct examination at length?

THE WITNESS: Yes.

THE HEARING OFFICER: All right. I'm going to deem those pages the direct testimony of Mr. Boiteau and I am going to ask the Reporter to make a part of the record in serial pagination order at this time pages II-7, II-8, II-9, II-10, II-11, II-12, II-13, III-63, III-64, III-65, III-66, IV-3, IV-25, appendix Exhibit 8, a two-page exhibit, Exhibit 761119:51; Table 13, Table 14, Exhibit 761119:52, as the direct testimony of Mr. Boiteau subject to cross-examination.

MR. KAFIN: Mr. Hearing Officer, there's one other thing that's behind you, and it's Exhibit 761119:6.

THE HEARING OFFICER: All right, and Exhibit 761119:6. I'm going to ask the project applicant to furnish a set of copies of those pages to the Hearing Reporter so that she can properly incorporate them into the minutes and at this time, I turn the witness over to Mr. Gitlen who I've been advised is the first party wishing to cross-examine Mr. Boiteau. Is that correct, Mr. Gitlen?

MR. GITLEN: Fine with me.

THE HEARING OFFICER: O.K. Proceed.

B. Surface Water

1. Morphometric and Hydrologic Characteristics

a. For any portion of any permanent river on or bordering the site, describe the following:

(1) channel morphology, including: depth, width, relative extent of pools, riffles, falls, etc.; substrate composition of bed; presence, number and size of islands; bank stability.

(2) hydrologic characteristics, including: size of drainage basin, average yearly flow, highest flow recorded, low flow frequencies, annual peak high flow, the magnitude and frequency of flooding and hydraulic capacities of the streams and rivers.

b. For any permanent stream located on any alternative site that information requested in (1-a) above should be provided.

c. Describe the existing natural characteristics of all shorelines of lakes, ponds, and permanent rivers and streams which could be altered as a result of development.

SURFACE WATER - OLYMPIC REGION

All of the proposed LPOOC Olympic facilities and alternative sites are located within the Lake Champlain Drainage Basin. The Basin is located in the northeastern corner of New York State and drains approximately 2,870 square miles.

Methodology

For the runoff analysis, the Modified Soil Cover Complex Method (United States Department of Agriculture, Soil Conservation Service SCS-TR-55) for estimating quantities and rates of runoff was utilized. The analysis was based on a 24-hour, 25-year frequency rainfall, assuming an average antecedent soil moisture condition. The results of this analysis are shown on Table SII-1. Runoff Curve Numbers were derived from the Soil Conservation Service as shown in Table SII-2.

INTERVALE SITE - WEST BRANCH AUSABLE RIVER

The outrun area of the proposed 70 and 90 meter ski jump site at Intervale borders directly on the West Branch Ausable River and is partially within the river floodplain.

The West Branch of the Ausable River, except for a few sluggish runs near the Village of Lake Placid has a continuous riffling flow through rocks and rugged boulders. The river streambed is dominated by boulders, rubble and bedrock along with limited amounts of gravel and sand. The river velocity is generally swift to torrential.

A U.S. Geological survey gaging station located approximately 4 miles downstream from the Lake Placid Outlet has monitored the river hydrology from 1919 to 1968. The tributary drainage area of the West Branch at this station location is approximately 116 square miles.* For a summary of pertinent hydrologic characteristics of the River based on data gathered at this station, see Table SII-3.

*U.S. Department of Interior, U.S.G.S. Water Resources Data for New York Part I. Surface Water Records, 1968.

TABLE SII-1

SITE/LOCATION	SITE AREA, ACRES	RECEIVING WATERS	PRE-DEVELOPMENT RUNOFF RATE cfs	PRE-DEVELOPMENT RUNOFF VOLUME[1] inches	POST-DEVELOPMENT RUNOFF RATE cfs	POST-DEVELOPMENT RUNOFF VOLUME[1] inches	INCREASE OVER PRE-DEVELOPMENT RATE	INCREASE OVER PRE-DEVELOPMENT VOLUME	MITIGATIVE MEA
1. Olympic Arena Field House, Speed Skating Oval/Existing Arena and High School	28.5	Mirror Lake outlet; Chubb River	17	0.9	37.8	1.35	122%	50%	Flow attenuatio
2. Ski Jump Site/ Intervale	47	West Branch Ausable River	28.5	0.75	40.1	0.90	41%	20%	None required
3. Olympic Village/ Ray Brook	199	Ray Brook	105	1.3	123	1.4	17%	8%	None required
4. TV Center/ Old Military Road	11.5	Chubb River	16.4	1.4	24.5	1.8	49%	29%	Flow attenuatio
5. Luge Course/ Mt. Van Hoevenberg	44	North Meadow Brook, West Branch Ausable River	37.2	1.0	44.0	1.1	18%	10%	None required

[1]inches of runoff over site area.

XIII Olympic Winter Games

	Item No.	Waters Item Number	Name	Description	Map Ref. No.	Class	Standards
C(T)	257	C-25-26 portion as described	West Branch Ausable River	From 1.0 mile upstream from dam at hamlet of Wilmington upstream to source.	C-25	C	C
C(T)	273	C-25-26-35 portion as described	Chubb River	Enters West Branch Ausable River from northwest 0.7 mile upstream from trib. 14 and 1.1 miles northeast of John Browns Grave. Mouth to a point on river located 1.4 miles upstream from mouth and 0.2 mile upstream from outfall of Lake Placid sewage treatment plant.	C-24	C	C
C(T)	274	C-25-26-35 portion as described	Chubb River	From a point 0.2 mile upstream from Lake Placid sewage treatment plant outfall upstream to source.	C-24 C-23 C-23	C	C(T)
C(T)	275	C-25-26-35-1 including P 248	Tributary of Chubb River	Enters Chubb River from north 0.6 mile upstream from mouth and 1.5 miles north of John Browns Grave. P 248 is located at source and 0.4 mile upstream from mouth.	C-24	D	D
C(T)	276	C-25-26-35-2 and trib.	Tributary of Chubb River.	Enters Chubb River from southwest 0.2 mile upstream from trib. 1 and 1.4 miles south of John Browns Grave.	C-24	C	C(T)
C(T)	277	C-25-26-35-P 249	Pond on Chubb River	Located on Chubb River beginning 0.7 mile upstream from trib. 2 and extending upstream for a distance of approximately 0.7 mile.	C-24	C	C(T)
C(T)	278	C-25-26-35-3	Mirror Lake Outlet	Enters Chubb River from north 0.8 mile upstream from trib. 2 and 1.5 miles southwest of peak of Cobble Hill	C-24	C	C(T)
B(T)	279	C-25-26-35-3-P 250	Mirror Lake	Located at source of Mirror Lake Outlet 0.4 mile upstream from mouth and in Village of Lake Placid.	C-24	B	B(T)
C(T)	280	C-25-26-35-3 P 250-1 including P 251	Tributary of Mirror Lake	Enter easterly side of Mirror Lake from east 0.6 mile west of Cobble Hill. P 251 is located 0.4 mile upstream from mouth and 0.2 mile north of peak of Cobble Hill.	C-24	C	C(T)
B(T)	283	C-25-26-35-5	Lake Placid Outlet	Enters Chubb River from north 0.4 mile upstream from trib. 4 and 2.2 miles northwest of John Browns Grave.	C-24 C-23	B	B(T)
AA	285	C-25-26-35-5-P 254 and trib.	Lake Placid	Located at source of Lake Placid Outlet 1.9 miles upstream from mouth and to north of Village of Lake Placid.	C-24 C-23	AA Special	AA Special
C	133	C-15-60 portion as described	Ray Brook	Enters Saranac River from northeast at eastern side of P 30 and 1.5 miles south of southern boundary of Saranac Lake Village. Mouth to 0.2 mile upstream from trib. 1 which enters from north 1.5 miles upstream from mouth and 0.8 mile east of Ames Mills	C-23	C	C
C	134	C-15-60 portion as described	Ray Brook	From 0.2 mile upstream from trib. 1 to source.	C-23	C	C(T)
C(T)	135	C-15-60-1 portion as described	Little Ray Brook	Enters Ray Brook from north 1.5 miles upstream from mouth and 0.8 mile east of Ames Mills. Mouth to water supply dam located 2.4 miles upstream from mouth and 2.5 miles northeast	C-23	C	

TABLE SII-3

HYDROLOGIC CHARACTERISTICS OF WEST BRANCH OF AUSABLE RIVER

1.	Average Discharge	212 cfs
2.	Maximum Discharge	10,800 cfs (9.22.38)
3.	Minimum Discharge	7.2 cfs
4.	Average Discharge, cfs per square mile	±1.5 cfsm
5.	Average Yearly Runoff	±20 inches
6.	MA7CD/10 Year Flow	36 cfs
7.	Mean Annual Peak Discharge	3,558 cfs
8.	Statistical Peak Flows:	
	a) 1 year frequency	1,440 cfs
	b) 5 year frequency	4,550 cfs
	c) 10 year frequency	5,550 cfs
	d) 50 year frequency	8,090 cfs
	e) 100 year frequency	9,310 cfs

SOURCES: 1. U. S. Department of the Interior, Geological Survey, Water Resources Data for New York, Surface Water Records

2. U.S.G.S. Log - Pearson Type III Calculations

1980 OLYMPICS
AUSABLE RIVER @ INTERVALE

ELEVATION	X-SECTIONAL AREA - SF: SQ.MI.	X-SECTIONAL AREA - SF: SF.	HYDRAULIC RADIUS (FT): P	HYDRAULIC RADIUS (FT): R
1675	0.23	460	300	1.53
1680	0.57	1140	500	2.28
1685	1.26	2520	800	3.15
1690	3.17	6340	1400	4.53
1695	5.89	11780	1650	7.13
1700	[illegible]	17560	1930	9.10

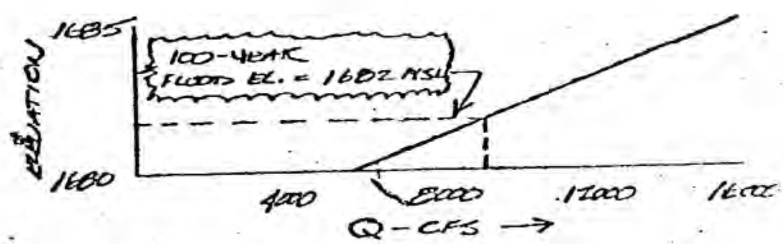
APPROX. 100 YR STORM FLOOD = 4800 CFS
(FROM USGS LOG-PEARSON ANALYSIS)

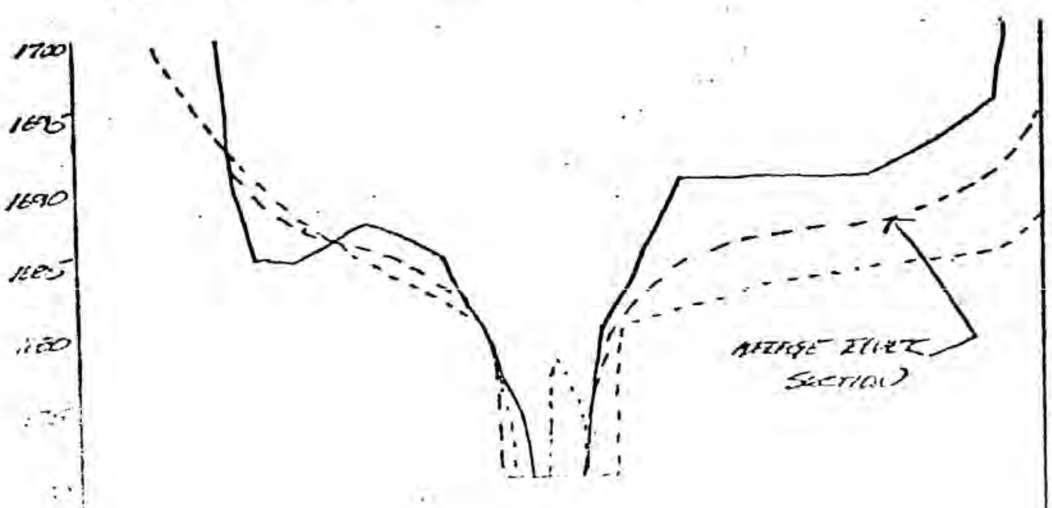
SOLVE MANNING'S FORMULA

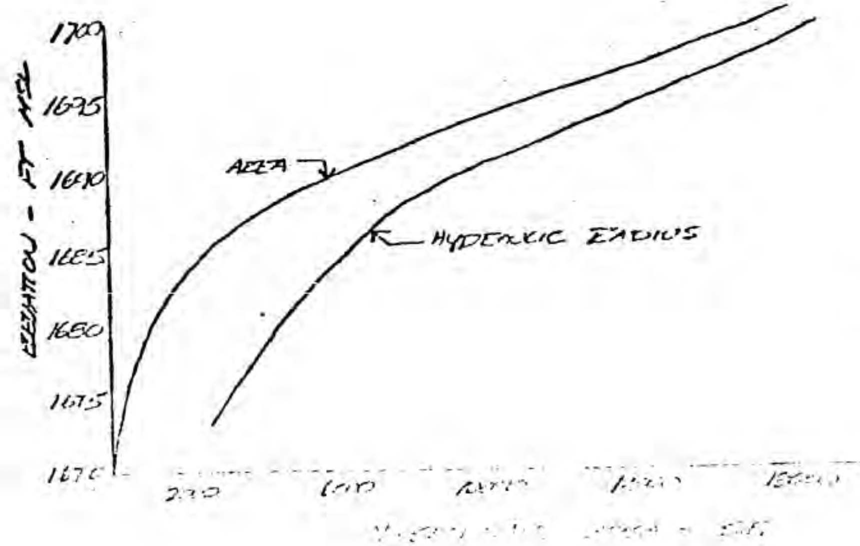
$Q = \frac{1.486}{N} a r^{2/3} s^{1/2}$ (ASSUME N=0.04; S=0.0065)

TRIAL 1 EL. 1685 MSL
(a = 2520 SF; r = 3.15 FT)
Q = 16,031 CFS (TOO HIGH)

TRIAL 2 EL. 1680 MSL
(a = 1140 SF; r = 2.28 FT)
Q = 5938 CFS (TOO LOW)







Since the ski jump site area is partially within the West Branch flood plain, the flood plain was delineated in order to assess the potential impact of the proposed program elements on the hydraulic capacity and increase in flood stage of the river. This delineation is shown in Figure IB6-3.

The flood plain delineation is based on hydraulic computations for determination of the 100-year frequency flood stage of the river reach in question. An average cross-section of the river reach bordering the site was utilized for the analysis. The 100-year flood discharge for the reach was determined from U.S.G.S. Water Supply Paper 1677, in which each stream is classified in a Flood Frequency Region and Hydrologic Area.

The figures below show pertinent hydrologic capacity data analyzed for the flood plain affecting the Intervale Site:

Surface Water	West Branch Ausable River
Tributary Drainage Area (Sq. miles)	106
Flow Capacity (cfs)	1,811
Flow Capacity Elevation (ft. MSL)	1.675±
Corresponding Storm Frequency	1.1±
100-year Flood Flow (cfs	9,300
100-year Flood Stage Elevation (ft. MSL)	1,682±

The outrun area of the proposed 70 and 90 M ski jump borders directly on the West Branch Ausable River, which is classified as C: best used for fishing and other uses, except water supply, food processing and contact recreation. See Table SII-2. New York State DEC has initiated a monitoring program of both the Chubb and West Branch Ausable Rivers. This program will identify flow characteristics and water quality of each stream.

No shorelines will be altered as a result of this project. Mitigation criteria will be applied, as set forth in Schedule III, IIF of this application, to maintain separation and avoid disturbance of the shore edge adjacent to this project.

Since alternatives to the proposed site were developed for study purposes, this level of information has not been developed for alternative sites.

IV. SEWAGE DISPOSAL

A. *Where individual on-site septic tank disposal systems using tile fields or seepage pits are proposed, indicate if they will be constructed according to New York State Department of Health or Department of Environmental Conservation specifications. If specifications differ in any way, including depth from bottom of tile field or seepage pit to groundwater or impervious material, please describe. Any other specifications or criteria, such as slope limits or shoreline and wetland setbacks proposed by the project sponsor should be described.*

Permanent on-site sanitary facilities will be provided for use during the Winter by competitors and for use in the Spring, Summer, and Fall by tourists visiting the jump and observation tower.

A men's and a women's restroom, each with two sanitary fixtures and a sink, will be provided in the warming building at the base of the jump tower. Assuming that 20% of visitors utilize these toilet facilities (.20 x 600 person/peak day) the flows to the leach field at 10 gallons/person will be approximately equivalent to four households (average flow (household = 350 gallons). These facilities will discharge to an underground septic tank at the top of the hill, thence via subsurface pipe to a 7,000+ square foot leach field located in the vicinity of the outrun of the 40 Meter Ski Jump. A surge tank will be required on the pipe at its point of entry into the leach field.

Detailed soils investigations will be necessary during the project design phase to determine the final location and size of the leaching area, however, the concept size of 7,000 square feet is thought to be adequate given the proposed number of sanitary fixtures and the soil characteristics of the outrun area.

It is the proponent's intent to construct all disposal systems in conformance with appropriate New York State Department of Health standards. If on-site investigations reveal such standards cannot be met, the proponent will alter the design specifications of the disposal system in consultation with the New York State Department of Health.

Temporary toilet facilities will be provided for spectators during competitive events by means of portable toilets located in the outrun area. These toilets will be pumped at least once daily and their contents disposed of at the Lake Placid Sewage Treatment Plant (see Question C following).

b. If a community sewage treatment system is proposed additional information will be requested.

There are presently no proposals to hook-up to existing community sewage treatment facilities.

C. *If it is proposed that sewage will be disposed of by use of holding tanks, describe the existing capacity of the Lake Placid Sewage Treatment Plant to treat such wastes.*

The use of holding tanks for sewage disposal will occur at the proposed project site only during major competitive events during which times portable toilets will be provided for use by spectators. It is the intent of the project proponent to discharge the contents of these portable toilets to the Lake Placid STP.

At present the Lake Placid STP receives an average daily flow approximately 50 percent of its capacity (1.35 MGD, capacity is 2.5 MGD. with a peaking capacity of 5.0 MG).

The Winter Olympics are likely to be the largest spectator event to which Lake Placid will play host. It is during the Games in 1980 that the Lake Placid Sewage Treatment Plant will be most taxed in terms of the Plant's ability to handle additional sewage flows. The cumulative effects on the STP of Olympic flows have been discussed and documented in the DEIS (see Appendix Exhibit in this application). The following paragraph from the DEIS summarizes the impact of all Olympic flows on the Lake Placid STP.

> "The maximum Olympic day flow brings the Lake Placid STP flow to 1.5 + .715 = 2.215 million gallons and the BODu loadings from 4,200 pounds to 6,450 pounds, or from 335 mg/l to 348 mg/l. The peak hourly flow is estimated at a 4.2 MGD rate. All of these parameters are well within the range of the design of the treatment plant and they should have little effect on the treatment processes. With 85% removals the discharge BODu to the Chubb River will be 970 pounds, which is well within its assimilative capacity during the Winter Games."

The composition of wastes from portable toilets is such that it may be discharged directly into the STP during low flow periods with no adverse effects to the treatment processes.

v. Estimate the quantity of sewage to be generated during the Olympic and post-Olympic time periods to be handled by the Lake Placid sewage disposal plant.

Estimated Flows: During the Olympic period the ski jump facilities will be used on three separate days. Total attendance, a combination of spectators and special service personnel, will vary from 16,900 on February 17, to 11,300 on February 18, to 17,600 on February 24.

Projecting the wastewater generations developed previously* the following data are presented as representative of the wastewater to be released at the Lake Placid Treatment Plant from the portable toilets at the Ski Jump site.

TABLE (7)

SKI JUMP WASTEWATER

CHARACTERISTIC	DATE GENERATED (2/17/80)	(2/18/80)	(2/24/80)
Volume (liters)	* 8080	5400	8980
BOD (mg/l)	5930	5930	6180
Sus. Solids (mg/l)	6920	6920	7210
Total N (mg/l)	2310	2310	2410
Total P (mg/l)	280	280	290

The total volume of wastewater to be treated at the Lake Placid STP during the Olympic Games was discussed in the preceding question of this application.

Post-Game demands based on spectator and athlete wastewater generation can be satisfied in the same manner as those during the Olympics. That is, spectators will use portable toilets, and the athletes will use those facilities constructed in conjunction with the Olympics.

The athletes' toilets in the warming building will be open to the public during the non-skiing season when the observation tower is in use. These toilets will discharge the on-site disposal system, a system of adequate capacity to accommodate the anticipated level of usage (i.e., 600 persons, peak day) of the tower.

*30 gpm average sewage flow.
300 gpm peak flow.

2. *Disruption of drainage patterns, including channelizing the flow of surface and sub-surface waters, modifications to stream and river beds, and wetland filling and drainage.*

Storm Drainage

Although the proposed inrun tower of the 90 Meter Ski Jump at Intervale will increase the runoff rate by approximately 41 percent from 28 cfs to 40 cfs, the site is located downstream in the Ausable River drainage basin such that the peak runoff from the site will occur far in advance of the River flood stage. Thus, this runoff increase will have a negligible effect on the potential for downstream flooding. The entrance road and parking areas will be covered by permeable gravel surfaces so that runoff should be somewhat reduced in these areas. There is existing drainage way under the existing 70 Meter Jump outrun. This will be investigated in the project design to determine if its hydraulic capacity is adequate to accommodate increased runoff from the new 90 Meter Jump. It will be extended, enlarged, or altered as necessary so as to mitigate against any bed or bank scouring.

Because any runoff increase from the proposed ski jump will have a negligible effect on the potential for downstream flooding, no mitigative measures for flow attenuation are necessary.

It should be noted that the Intervale Site was substantially cleared and disturbed prior to the 1932 Games, and that the amount of open land in the project area subsequent to the proposed development is expected to be less than in the earlier condition. The earlier condition is illustrated in 1932 photographs of the site as Appendix Exhibit

Litter control should be instituted in order to reduce the potential for COD loadings.

5. *Floodplains - Describe the changes in the one hundred year frequency floodplains of all permanent streams and rivers, on or nearby the project area, as a result of the project and such development activities as filling in existing floodplains or streams, creation of impervious surfaces, storm drainage systems, disturbances of existing vegetation, and other activities that could have either a hydraulic or hydrologic impact. Evaluate potential changes in flood flow velocities and rates.*

The proposed program for the 70 and 90 meter ski jumps requires the construction of a sloped outrun at the end of the jump landing area. This upslope is required in order to compensate for the limited landing area available.

Calculations were made to analyze the potential for flooding due to the proposed filling. (See Schedule II, Page II-12.)

Construction of the sloped outrun berm would require the filling of approximately 3,000 square feet of the adjacent 100 year flood plain of the West Branch of the Ausable River. The corresponding decrease in the cross-sectional area of the floodway through this reach of the River would be approximately 25 square feet, or 1.5% of the existing floodway section. Upstream, the River floodway will be confined within relatively steep side slopes. Downstream, however, from the site below Route 73, the topography is flat and the flood plain extends over 2,000 feet across at its widest point.

Re-analysis of the potential flooding conditions due to the proposed filling through this reach showed that increases in the River flood stage will be negligible. The conclusion, therefore, is that the potential for flood stage increases, either upstream or downstream from the ski jump site area, will be negligible.

The effect of increased runoff as a result of the proposed ski jump for downstream flooding is negligible. This impact analysis is discussed in more detail in Sectio A, 1, b of this application.

At present, it is planned that portable toilets for spectator use and a permanent subsurface disposal system for athlete's use will be provided. (See also Schedule III, Section IV, 1 above.) Given that the sewage wastes accumulated in the portable facilities will be disposed of in the Lake Placid STP, the following section summarized capacities of the Plant and all contributary flows.

(a) Summary of Contributory Flows

To best evaluate the cumulative effects of the Olympics on the Lake Placid STP, a summary of the Olympic flows must be tabulated and superimposed on the present flows.

Summertime flows, as presented in Figure IIIE1-2 represent the base flow to which the Olympic flows will be added. This base flow is contributed from existing industrial and commercial contributors as well as the permanent residents, seasonal residents and approximately 3000 commercial lodgers and guests. Additional flows, during the Olympic period, will be generated by lodgers and guests, daily visitors, and others. These flows are called Category I flows; they are directly contributary to the sewer system and are not associated with a particular Olympic event or function.

The following criteria were established to calculate the volume and distribution of the Category I flows.

Lodgers. There will be 1,000 more lodgers than the 3,000 of the base flow period. A flow of 100 gallons per lodger per day with a flow distribution directly proportional to the present STP flow was assumed.

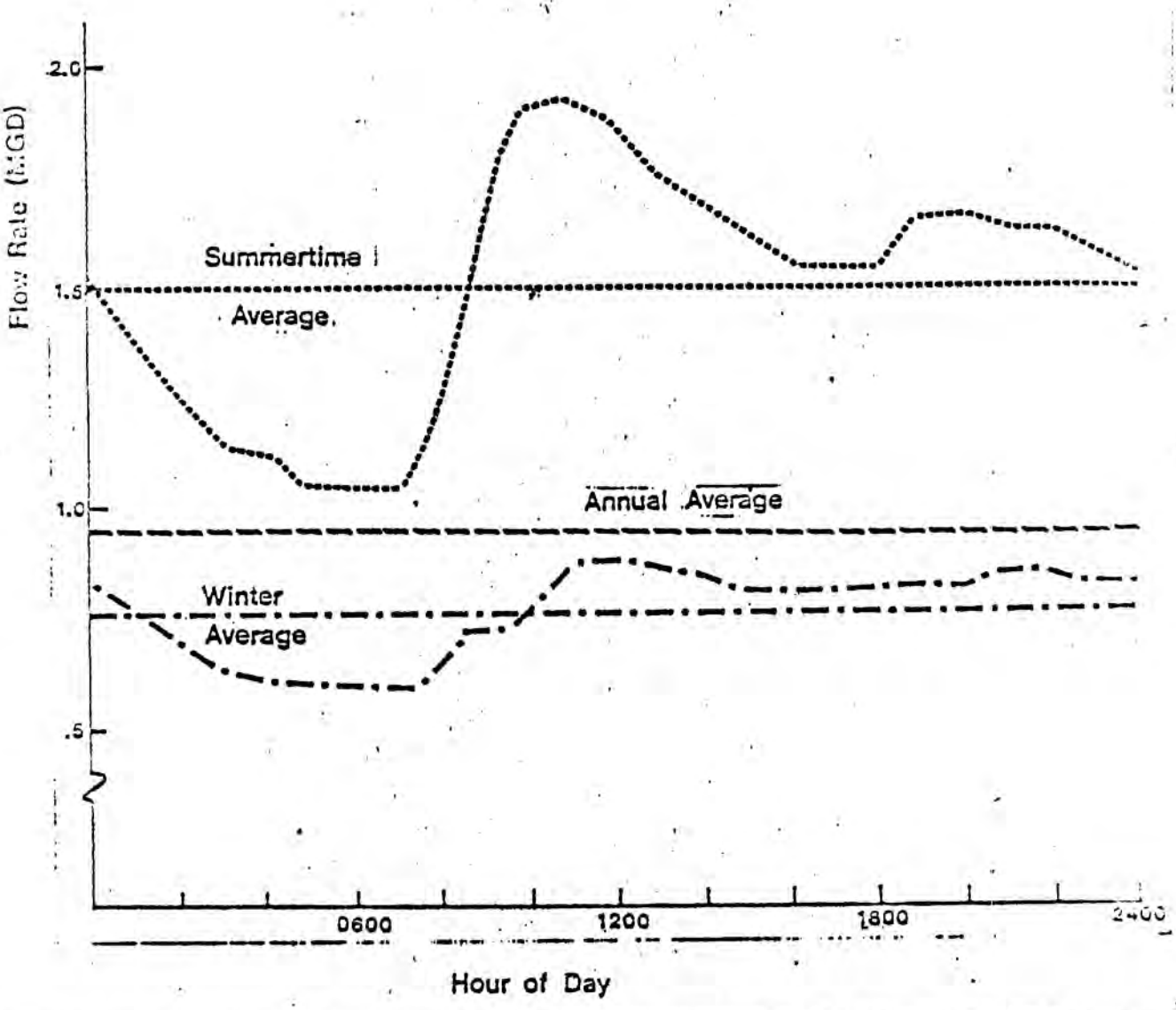
Guests. The projected number of guests during the Olympic period varies from 978 to 3,911. A flow of 100 gallons per guest per day with a flow distribution directly proportional to the present STP flow was assumed.

Daily Visitors. The projected number of daily visitors varies from a low of 8,335, on February 21, 1980, to a high of 18,657, on February 22, 1980. It is assumed that the flows generated, at the rate of 10 gallons per visitor per day, will be evenly distributed over a 12-hour period, 9 am to 9 pm.

Others. This category, which includes other people not already accounted for and a safety factor, consists of 2,000 people. The flow generated and its distribution is based on the daily visitor assumptions.

A normal conclusion suggests that the flows from the TV Center, High School and Administration building should also be included in the Category I flows. However, it was felt that these flows, or flows of comparable amounts, were already included in the base flow. The TV Center is the exception, for with its own subsurface disposal system, it will not impact the treatment plant.

The next category of flows, Category II flows, are those which are generated by Olympic events and flow directly into the sewer system. These include the flows from the Arena Complex and Speed Skating Oval. Spectators from the Oval events may use either the Arena or High School facilities. Estimates daily flows are presented in Table .



XIII Olympic Winter Games

Sewage Flows at Lake Placid, 1976

— Annual Flows

····· Summertime Flows

•—• Wintertime Flows

Source: Sasaki Associates, Inc.

Scale: As Noted North

TABLE (12)

CATEGORY II SEWERAGE FLOWS (gpm)
(ARENA & OVAL)

HOUR	DATE (FEBRUARY 1980)										
	14	15	16	17	18	19	20	21	22	23	24
0000		26	5	26	5	26	5	26	5	26	5
0100		3		3		3		3		3	
0200											
0300											
0400											
0500											
0600											
0700											
0800							8				
0900	8	8	8	8	8	8	25	17		33	
1000	25	25	25	25	25	25	33	33		33	
1100	33	33	33	33	33	33	33	33		33	
1200	40	24	49	33	51	33	52	33	23	33	
1300	36	3	38	48	64	37	73	18	47	33	
1400	33		33	50	43	30	45	27	47	33	
1500	33		33	47	40	27	40	27	47	33	12
1600	3		3	47	3	27	3	27	4	5	33
1700	47	24	47	47	47	27	47	27	47	0	47
1800	47	47	47	5	47	15	47	15	47	12	47
1900	47	47	47	24	47	35	47	35	47	35	5
2000	4	47	4	47	4	47	47	47	47	47	
2100	47	47	47	47	47	47	47	47	47	47	
2200	47	47	47	47	47	47	47	47	47	47	
2300	47	47	47	47	47	47	47	47	47	47	
2400	26	5	26	5	26	5	20	5	26	5	

The final category of flows, Category III flows, are those which are generated by the remote Olympic events (see Appendix). These flows are collected during each remote event and fed directly into the waste stream of the Lake Placid STP during the early morning hours of the following day. The flows generated at the Intervale site are to be included as Category III flows.

A summation of the three categories of Olympic flows reveals the two highest flow days are the 18th and 20th of February 1980. Figure graphically depicts the projected flow at the Lake Placid STP on February 20, 1980.

(b) Summary of BOD Loadings

The wastewater BOD from Category I and II flows are assumed to have the same concentrations as at the present facility. The characteristics of Category III flows are indicated in Appendix . A summary of the BODu characteristics, from the additional Olympic flows, as impacted on the Lake Placid Treatment Plant follows.

TABLE (14)

CATEGORY I & II & III WASTEWATERS
OF FEBRUARY 20, 1980

TYPE	Q(MG)	BODu mg/l	BODu #
Category I	0.674	335	1880
Category II	0.038	335	110
Category III[1]	0.00296	10530[2]	260
TOTAL	0.715		2250

(c) Effects of Olympic Flows

The maximum Olympic day flow brings the Lake Placid STP flow to 1.5+ .715 = 2.215 million gallons and the BODu loadings from 4,200 pounds to 6,450 pounds, or from 335 mg/l to 348 mg/l. The peak hourly flow is estimated at a 4.2 MGD rate. All of these parameters are well within the range of the design of the treatment plant and they should have little effect on the treatment processes. With 85% removals the discharge BODu to the Chubb River will be 970 pounds, which is well within its assimilative capacity during the Winter Games.

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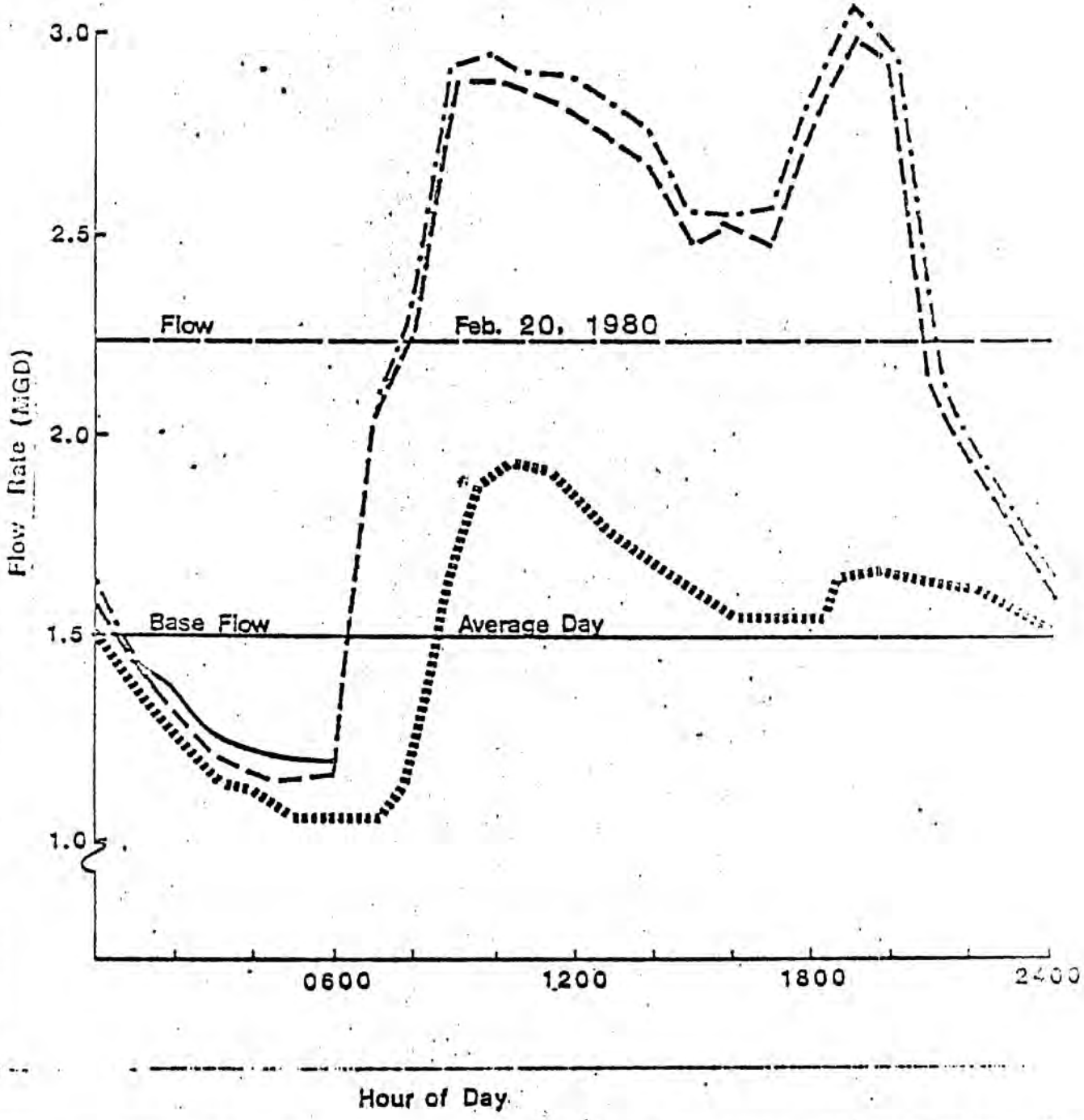
(1) Flow generated February 19, 1980.

(2) Assumed BOD_5 = 60% of BODu.



XIII Olympic Winter Games

Sewage Flows at Lake Placid, 1980

Source: Sasaki Assoc., Inc.

Scale: As Noted North

Basic STP Flow = 1.5 MGD

1.5 MGD + Category I Flows

1.5 MGD + Category I & II Flows

1.5 MGD + Category I & II &

Categories are Described in

- 598a

XIII Olympic Winter Games
Flood Plain

Fig. IB6-3

Existing Water Body

Extent of 100 Year Flood

Source: Sasaki Associates, Inc., 1976

Scale: North

761119: 6

CROSS-EXAMINATION

BY MR. GITLEN:

Q. Mr. Boiteau, I assume that you're generally responsible for the runoff of water from the Intervale site and the quantity of erosion and so on that might occur; is that true?

A. I'm responsible for areas pertaining to runoffs from the site. I have some knowledge of the area pertaining to soil erosion. However, I did not have an actual involvement in the preparation of that area. That would be better handled through Richard Foster, our geologist.

Q. Now, is my reading of the application correct when I read that there is no proposed direct discharge to the West Branch of the Ausable River?

A. Would you say that, the question, again please?

Q. Is my reading of the application correct when I say that there is no proposed direct discharge to the West Branch of the Ausable River.

A. Of storm water?

Q. Storm water.

A. I don't believe that's correct, no.

Q. Where will such discharges occur?

A. You're talking about a point -- a point discharge of pipe, piping discharge, or are you talking about natural runoff flow from the site entering into the West Branch?

Q. Well, let's include it whether it comes from a pipe or a ditch or any other discrete conveyance.

A. You're -- I still don't understand the thrust of your question.

Q. O.K. Let me go through it piece by piece.

THE HEARING OFFICER: Excuse me, Mr. Gitlen. Mr. Boiteau, is there going to be any discharge of storm water from the project site?

THE WITNESS: Yes, there will be.

THE HEARING OFFICER: What is the manner of discharge?

THE WITNESS: As far as I understand now, it is proposed that the nature of the discharge will remain as is currently in natural flow patterns into the West Branch of the Ausable.

THE HEARING OFFICER: That means overland runoff?

THE WITNESS: Yes.

THE HEARING OFFICER: What about the consideration of storm water runoff by means -- means of controlling storm water runoff by means of constructive devices such as ditches, pipes and the like?

THE WITNESS: There's a possibility that that type of construction may exist internally within the site but it is anticipated that natural flow patterns will be maintained and be natural overland flow into the West Branch of the Ausable.

THE HEARING OFFICER: Has there been any consideration of sheet erosion as a result of overland flow and discharge of storm water runoff?

THE WITNESS: Yes, there has been.

THE HEARING OFFICER: All right. What are the considerations, and where are they indicated on the report?

THE WITNESS: That area regarding sheet erosion would be, I think, best handled -- is not necessarily one of the areas that I'm responsible for.

THE HEARING OFFICER: You want to defer to Mr. Foster the area on sheet erosion?

THE WITNESS: Yes, I would.

THE HEARING OFFICER: All right. In a general sense, are you aware of the fact that there will be sheet erosion as a result of surface runoff?

THE WITNESS: Yes, I am.

THE HEARING OFFICER: All right. Go ahead, Mr. Gitlen.

BY MR. GITLEN:

Q. I'd like to draw your attention to page IV-3 of the application. I think that has been noted an exhibit but I don't -- I can't keep track of the numbers.

THE HEARING OFFICER: We'll refer to it as page IV-3. It's part of the direct testimony of Mr. Boiteau.

Q. (Continuing) Now, you indicate on that -- on that page that there's an existing drainage way under the existing 70-meter jump-out. Would you explain what you mean by a drainage way?

A. It's a constructed swale area to transport runoff from that area down to the Ausable.

THE HEARING OFFICER: Is it described in detail in any exhibit or appendix to the application?

THE WITNESS: I don't believe it is, no.

THE HEARING OFFICER: All right. Is the detailed description of the construction of that device or system available?

THE WITNESS: Not at present, no.

THE HEARING OFFICER: Was it ever available?

THE WITNESS: No, I don't believe so.

THE HEARING OFFICER: It doesn't exist?

THE WITNESS: No, I do not believe so.

THE HEARING OFFICER: All right, go ahead, Mr. Gitlen.

BY MR. GITLEN:

Q. So then does this constitute essentially a ditch which has its end point at the Ausable, west branch of the Ausable River?

A. I believe it goes down to the lower part of the site area and naturally finds its way into the west branch from that point.

Q. Now, you indicate that there is -- that it may become necessary, do you not, to extend, enlarge or alter that runoff conveyance so as to mitigate against any bed or bank scouring. "Bed or bank" of what?

A. Of the river.

Q. So, in other words, when there's periods of high runoff, there's a considerable flow coming down this ditch, is that correct?

A. Possibly, yes.

Q. And will that flow increase as a result of the proposed construction?

A. Yes, it will.

Q. So that it might become necessary to more normally channel the water in some sort of a pipe so as to avoid the scouring or the erosion of the bed or the bank; is that not correct?

A. That would be a possibility, yes.

Q. Now, again referring to page IV-11 of the application, it's indicated on that page, is it not, that the design of the -- of the 90-meter jump hill will require drains of some sort to carry surface and sub-surface seepage, is that correct?

A. Yes, it is.

Q. And where will that surface and sub-surface seepage be carried?

A. It could be outleted down the lower portion of the site area to be naturally drained to the west branch of the Ausable or it may be a possibility

that it may be carried directly to the -- to the bank of the river for discharge.

Q. Now, this is a -- the runoff from this area will be increased as a result of the proposed construction at the Intervale site, is that correct?

A. That's correct.

Q. And you've computed in the application, have you not, the extent of the increase of that runoff?

A. Yes, I have.

Q. And could you state just for the transcript the approximate increase that would occur by virtue of the construction?

A. I believe, based on a twenty-five year storm frequency, the increase in runoff from the entire 47-acre Intervale site will be approximately 40 percent.

Q. Now, you also indicated in the application, and I'm assuming it's you, and correct me if it's not -- that there would be provision for some sort of drainage basins which would have the function of presenting a direct discharge of storm water to the west branch of the Ausable; is that not correct?

A. It's anticipated that during -- and recommended

that during construction, sediment basins would be constructed to prevent sedimentation into the west branch during the constnuction -- excuse me, during the construction and possibly post-construction period. It is not anticipated that retention basins for the control of increases in storm water would be necessary on the site.

Q. In other words, these -- these basins are primarily designed for the during-construction and just post-construction period when the potential for soil erosion and resulting siltation might be highest, is that correct?

A. Yes, it is.

Q. And so these are not designed to be permanent retention facilities for the purposes of recharge of surface water?

A. That's correct.

THE HEARING OFFICER: Is this increase in runoff permanent or only temporary during the period of construction?

THE WITNESS: No, the increased runoff from the site will be permanent.

Q. Now, it's proposed to construction portions of

the reviewing stands for the 90-meter jump within the 100-year flood plane, is that not correct?

A. That's correct.

Q. And is there any provision that you're aware of which would be designed to mitigate the effect of that flooding on the -- on those construction of stands, on those spectator stands in the event there were such a flood?

A. I'm not aware of any provisions, no.

THE HEARING OFFICER: Mr. Boiteau, assume the 100-year flood came, what would happen to the stands?

THE WITNESS: If constructed properly, my opinion would be there would be no effect.

THE HEARING OFFICER: If constructed less than properly?

THE WITNESS: Possibly damage.

THE HEARING OFFICER: Would you consider spending -- withdrawn. Is the construction of the stands to withstand the 100-year flood more expensive than if they didn't have to withstand a 100-year flood?

THE WITNESS: I would say no.

THE HEARING OFFICER: Same price?

THE WITNESS: I would say yes.

THE HEARING OFFICER: All right. If the stands were lost, washed away completely in the 100-year flood, would that interfere with the conducting of the ski jump for the 1980 Winter Olympics from the facility proposed?

THE WITNESS: I don't understand the question.

THE HEARING OFFICER: If there were no stands, could you still jump off the ski jump?

THE WITNESS: I would say yes.

THE HEARING OFFICER: All right. Could the stands be located anywhere else than on the 100-year flood plain?

THE WITNESS: I would think they could. I -- I have no knowledge of their --

THE HEARING OFFICER: All right. They could be relocated if they had to. Go ahead, Mr. Gitlen.

BY MR. GITLEN:

Q. Have you developed any estimate as to the size of the basins, the sediment basins that would be required during construction to handle the surface water runoff?

A. No, I have not.

Q. Have you computed the number of acrefeet of water that would result from, say, the 1 in 25 year rainfall event that would leave the site?

A. Not specifically, no.

Q. Or for any other rainfall event?

A. You talking about the total volume of water that would be leaving the site?

Q. The total volume of water that would have to be collected.

A. As I stated previously, there's only -- there's no recommendation to provide retention basins for the control or storage of runoff.

Q. Well --

A. Within the site limits.

Q. Well, let me just -- let me just try to clarify. To your knowledge, on Page III-84 if you will of the application, Roman numeral III- Arabic numeral 84 -- do you have that?

A. Yes.

Q. And under the paragraph subheaded by the letter (h), the first two sentences which stated, "at a point where a runoff leaves the site a sediment basin or basins will be constructed. The sediment basin (s) will be designed, I assume, in an appropriate manner." My question to you is: This indicates to me that prior to the time that any runoff leaves the site there will be sediment basins; is that your understanding?

A. Well, runoff leaves the site now. The intent here is that during construction where disturbance of the site will occur, where areas -- points of where runoff are leaving the site, sediment basins will be constructed to trap sediment and to try to mitigate the effects of sedimentation from the site disturbances before the runoff is discharged to the Ausable.

Q. So where would these basins be constructed?

A. They would be -- they would be constructed at low points, natural drainage patterns where runoff would naturally leave the site and, if necessary, if the site is -- if the situs topography is such that sheet runoff occurs, there would be temporary berming in order to channelize runoff into retention basin.

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Q. Now, the lowest -- generally the lowest point at the site is the bank of the west branch of the Ausable River, is that correct?

A. That's correct.

Q. So does that mean that there will be sediment basins constructed on the bank of that river?

A. No, that's not correct. Sediment basins will probably be constructed away from the bank area so that disturbance of the bank area itself will not occur.

MR. KAFIN: Mr. Hearing Officer, there is a conceptual sediment control plan contained in the application and that is the responsibility of Mr. Foster and perhaps Mr. Gitlen might want to direct those questions on erosion to Mr. Foster rather than Mr. Boiteau and he can do so

with reference to the specific exhibits that shows approximately where these basins will be.

Q. Mr. Boiteau, do you have any knowledge as to the numbers of acres that will be disturbed during construction at the Intervale site?

A. No, I don't.

Q. So you would have no way at all at this point in time of computing the amount of water that might have to be retained?

A. There are standard design criteria of the State for designing sedimentation basins during construction and those design criteria will be used in the detailed design of sedimentation basins. I believe that in the sections of the permit application regarding sedimentation, we have done some calculations to approximate exactly what the areas of the site that will be disturbed and the estimates of volume of sedimentation that will be collected within the sedimentation basins.

Q. But you have not computed the size of area that would have to be disturbed in order to -- in order to construct these sedimentation basins?

A. No, I have not personally, no.

Q. Has anyone at Sasaki Associates?

A. Yes.

Q. To your knowledge? And who would that be?

A. That would be Mr. Foster.

Q. All right. I'd like you to turn now to Page III -- Roman numeral III-31 of the application which is a table, and ask you if you participated in any way in the preparation of this table.

MR. KAFIN: Objection. That is not part of his direct testimony.

THE HEARING OFFICER: I'll overrule. Go ahead, Mr. Gitlen.

MS. NICHOLS: May we have the page?

THE HEARING OFFICER: III, Roman III- Arabic 31.

MS. NICHOLS: O.K.

THE HEARING OFFICER: Mr. Gitlen, there are contained in this summary designated "Comparative evaluation of primary location alternatives with that of Intervale" and certain information dealing with water quality and sedimentation and siltation and drainage and runoff and existing flow characteristics perhaps. To that

extent I'm going to permit Mr. Gitlen to ask you questions thereon.

Q. Did you participate in the preparation of this table in any way?

A. No, I did not.

Q. You did not. Did you at any time do any assessment on the extent of water drainage, surface water runoff that would be occasioned if a 90-meter ski jump was constructed at the Bassett Mountain site?

A. No, I did not.

Q. Have you ever visited the Bassett Mountain site?

A. I have not.

Q. And your -- I assume then your analysis of hydrology has been solely limited to the Intervale site?

A. It has.

Q. Are you also responsible for water supply, issues relating to water supply?

A. Yes.

Q. Is my assumption correct that the potable water supply is proposed to be from the municipal system, water supply system?

A. No, that is not correct. The proposed water supply system for the Intervale site is well water supply.

Q. And in other words, a well would be drilled right on the premises?

A. That's correct.

Q. Now, are you familiar with the proposal that snow-making equipment would be installed on the 90- and 70-meter ski jump?

A. I am familiar that snow-making equipment is proposed, yes.

Q. And would the source of water for that snow-making equipment be the Ausable River?

A. Yes, it would.

Q. And is there any provision for any type of an intake structure or other permanent structure on the bank of that river for the purpose of supplying water to the snow-making system?

A. I am not familiar with the details regarding intake structures for snow making.

Q. And so you haven't considered the potential for -- strike that. During the course of your investigations, was there any determination made as to the

closest distance from the Ausable River that construction will occur at the Intervale site?

A. Yeah, of any construction?

Q. Of any construction.

A. I -- I would -- I'm not personally familiar with exact details regarding the limits of area of construction, no.

Q. So far as you're concerned, there could be construction right up to the bank of the river and perhaps in the river?

THE HEARING OFFICER: I'm going to sustain --

A. No, that is not correct.

THE HEARING OFFICER: I'm going to sustain an objection and strike the witness' answer in view of his prior answer on the grounds it calls for speculation.

MR. GITLEN: So let me just make sure I understand this. You have no knowledge of whether and how construction would be limited in and around the banks of the west branch of the Ausable?

MR. KAFIN: That's been asked and answered.

THE HEARING OFFICER: Sustained.

MR. GITLEN: Well, if you'll just pardon my -- my ignorance, the question was not answered so clearly as I'd like to get an answer at this time.

THE HEARING OFFICER: Then rephrase the question calling for a yes or no answer and I'll let him answer it.

Q. Am I correct in my assumption that you have no knowledge of the extent to which construction might be required on the bank or in the bed of the Ausable River?

A. I have general knowledge in that area but not specifics. That could be given in other areas of the report.

THE HEARING OFFICER: Mr. Gitlen,

Q. Mr. Boiteau, so I don't miss the boat after you leave, is Mr. Foster the witness who's most familiar about the sedimentation basins and how they'll be operated and maintained, and so on, or are you?

A. How they will be operated and how they will be maintained?

Q. Yeah. Well, let me ask you this: will they, for example, be allowed -- what will happen if they show up? It's a very simple question.

A. The intent here is to size them such that they will be kept at certain capacity and procedures must be instituted such that they're cleaned out periodically.

Q. Well, do you know, for example, that in each required location you would have sufficient room for a sedimentation basin of sufficient size?

THE HEARING OFFICER: I'm going to --

MR. KAFIN: Objection. This falls outside the competence of this witness. I think these questions are better addressed to Mr. Foster.

THE HEARING OFFICER: Mr. Gitlen, if the witness doesn't have the specific information, I'm going to direct the project applicant to keep

him here during the testimony of Mr. Foster and between the two of them we ought to be able to complete the record. I'll sustain the objection.

BY MR. GITLEN:

Q. Have you or your colleagues considered the potential of the ground that would be frozen during a substantial portion of the year and, therefore, would have no capacity for absorption of surface water?

A. Regarding site runoff?

Q. Yeah.

A. I don't -- would you re...

Q. If you have a thaw in January and you have a sedimentation basin which is dug to a depth of, let's say, 6 or 7 feet, is it not possible or, indeed, likely that the ground would remain frozen even though snow and so on would melt and form substantial amounts of runoff?

A. Sediment basins --

THE HEARING OFFICER: Hold it. The question is: will ground -- do you understand that the ground will remain frozen during a January thaw, yes or no?

THE WITNESS: Yes, I do.

THE HEARING OFFICER: All right, will it?

THE WITNESS: Will the ground remain frozen?

THE HEARING OFFICER: Yes.

THE WITNESS: I would think it would.

THE HEARING OFFICER: All right. Now Mr. Gitlen?

BY MR. GITLEN:

Q. Now, when the water that melts builds up in the sediment basin, how will there be provision for overflow?

A. For what?

Q. Overflow. Assuming -- assuming the sedimentation basin would then show up because there's no percolation through the ground?

A. The sediment basin --

THE HEARING OFFICER: Hold the record or hold your answer, Mr. Boiteau. I'm going to sustain an objection to the question as to form. Mr. Boiteau, is there any evidence

that the sedimentation basin will be open for the purpose of accepting sediment or runoff during a hypothetical or postulated January thaw, or will they be closed?

THE WITNESS: No, they would be open.

THE HEARING OFFICER: They would be open, all right. Is that an assumption, a design assumption on your part?

THE WITNESS: Is it anticipated that or proposed that they will act that way?

THE HEARING OFFICER: Yes.

THE WITNESS: I believe so, yes.

THE HEARING OFFICER: All right, Mr. Gitlen, go ahead.

Q. Now, is there a potential in your judgment for that sedimentation basin to then fill up with water during the course of a thaw, for example?

A. Yes, it will fill up.

Q. And will there be any provision for the overflow, that is then bound to occur?

A. The sediment basin design is based on the premise that water will overflow from the basin

to its discharge point. They are not designed such that the water will infiltrate into the ground water system.

Q. In other words, the water will be flowing in at one end and flowing out at one end?

A. That's correct.

Q. And in the middle you would expect sediment to settle out to the bottom of the basin?

A. That's correct.

Q. And then that water would continue in its natural or unnatural course depending on the topography to some point of discharge or ground water recharge?

A. That's correct.

MR. GITLEN: I have no further questions.

THE HEARING OFFICER: All right, Ms. Nichols.

MS. NICHOLS: Yes.

THE HEARING OFFICER: I understand we have coffee and if anyone feels the desire and need therefor, they may go get it. I assume the Olypmic Committee would appreciate a constribution to the cause therefor.

MS. NICHOLS: Could I have just a moment please?

THE HEARING OFFICER: Yeah, let's take a three-minute recess.

(Whereupon a short recess was taken.)

THE HEARING OFFICER: All right, everybody, let's go back to work. We're going to reconvene at 11:21. Ms. Nichols?

MS. NICHOLS: Thank you, sir.

CROSS EXAMINATION

BY MS. NICHOLS:

Q. Mr. Boiteau, do you have at your disposal Exhibit 761119:59? That's characterized on the exhibit list as your qualifications.

A. No, I don't have a copy.

THE HEARING OFFICER: I'll loan the witness my copy thereof.

Q. All right. Now I'd like to ask you a few questions about some of these projects, these selected projects that indicate your technical and supervisory capacity. Will you tell me what your responsibilities were with reference to the Little River Hydrological Study?

A. I was a project manager of this project which involved an evaluation of the impact of construction or widening of an interstate highway in Northern Massachusetts and I had direct responsibilities for all the hydrological inventory and analysis in the

report.

Q. Now, did that involve potential construction of a roadway in the immediate vicinity of a river or rivers?

A. Yes, it did..

Q. And from your recollection as project manager, about how long did that study take, about how many months?

A. I would estimate that study took approximately two months.

Q. Approximately two months?

THE HEARING OFFICER: If I may, how long did your study of this site that is the subject matter of this hearing take?

A. I would estimate approximately one month.

Q. All right. With reference to the next item on this indication of selected projects, that's the Krehling Industries?

A. Krehling Industries.

Q. Krehling Industries in Naples, Florida. You were also identified as the project manager on that site. Would you indicate the kind of responsibilities that you had with reference to your civil engineering?

A. I was involved in the preparation of an environmental impact study for a development of regional impacts report to the State of Florida regarding this proposed development, and my areas of responsibility included utilities such as water supply, sewer disposal, solid wastes and storm water management including conceptual design of the site facilities.

Q. But if I understand the indication from your counsel, you were not responsible for the sewage treatment aspects of the site at Intervale, is that correct, or were you responsible for the sewage treatment issues?

A. I was not directly responsible nor did I have -- do the detailed analysis that is in the report now.

Q. That was done by who else, if you know?

A. This was done by a subconsultant to our office, a Mr. Clark, from Clark Engineering Cooperative.

Q. Who was responsible for reviewing it on behalf of Sasaki Associates?

A. I was.

THE HEARING OFFICER: All right. Did you approve the report of the consultant?

THE WITNESS: Yes, I did.

THE HEARING OFFICER: Are you familiar with the report of the consultant?

THE WITNESS: I am.

THE HEARING OFFICER: I'm going to rule you can testify to it if counsel wants to ask you questions thereon. Do you have a copy? Do you have a copy of their report, does Sasaki?

THE WITNESS: The -- their report is contained in the -- in the application itself.

THE HEARING OFFICER: Identify the portions, please.

THE WITNESS: It would be Page -- Section III, Page 68 -- excuse me, Section III, Page 63, Page 64, Page 65, 66.

MR. KAFIN: May I say for the record that these are pages for which this witness has previously taken responsibility.

THE HEARING OFFICER: Yes, I'm aware of that. You may inquire thereon.

MS. NICHOLS: All right. If it please the Hearing Officer, since I expect to go through the witness' page responsibilities in a chronological order, having established that responsibility, I will delay the specific questions on that aspect for a few moments.

THE HEARING OFFICER: O.K. Go ahead.

BY MS. NICHOLS:

Q. Mr. Boiteau, the project your professional vita in which I'm most interested is the Bates Nordic Training Center at Auburn, Maine. Now, you're identified on that project as a project engineer rather than a project manager. Would you indicate to me what the differences in responsibilities are with reference to your professional activities?

A. As project manager, we designate overall responsibility for the entire project, whereas as project engineer, I would have specific responsibilities related to specific issues.

Q. And in the Bates Nordic Training Center project, your specific responsibilities were with reference to which kinds of activities?

A. Specifically regarding areas pertaining to sewer disposal for the site.

Q. Does the Bates Nordic Training Center, to your knowledge, involve -- or is the Bates Nordic Training Center adjacent to any kind of water bodies?

A. Yes, it is.

Q. What -- what type of water bodies?

A. Adjacent to a river flowing into a lake.

THE HEARING OFFICER: Which river?

THE WITNESS: I cannot recall.

Q. Can you recall -- you've been on the site?

A. Yes, I have.

Q. Can you recall the general characteristics of the river?

A. It was a small mountain stream.

Q. Would it --

A. Flowing adjacent to the site.

Q. Would it be fair to say that it was a stream comparable to the west branch of the Ausable?

A. I would say no, it was much smaller in size.

Q. Were there any other parameters in which it was comparable or not comparable to the west branch

of the Ausable?

A. Only that it flew -- excuse me, only that it flowed adjacent to the site.

Q. And has this structure -- and has this training center been constructed?

A. I have no knowledge of that, no.

Q. Your responsibilities ended at which point with reference to the site?

A. Doing preliminary feasibility studies for this facility, specifically regarding sewage disposal and site access and utilities.

Q. In the course of your work as a project engineer with the Bates Nordic Training Center proposal, did you have occasion to make recommendations as to the type of endeavors that should be undertaken to minimize runoff from this stream or runoff from the site into the stream?

A. No, I did not.

Q. Did anyone on your project team engage in that activity?

A. I do not believe so, no.

Q. About how long, if you remember, did the -- did your work as a project engineer on the Bates

Nordic Training Center take?

A. I would estimate it was only several weeks.

Q. Approximately the same amount of time as you spent on the Intervale site?

A. No, it was less time than I spent on the Intervale site.

Q. But you indicated to us just a moment ago in response to the Hearing Officer's question that you, in your judgment, had spent approximately one month on the Intervale site?

A. That's correct.

Q. That's correct, and this was somewhat less than that?

THE HEARING OFFICER: Counselor, excuse me just a moment. Mr. Boiteau, with reference to the project that counselor has asked you questions about, the Little River Hydrological Studies, the Krehling Industries, the Princeton Forrestal --

MS. NICHOLS: No, sir.

THE HEARING OFFICER: You didn't ask about that. And the Bates Nordic Training Center, were your recommendations and proposals

Now, I am almost ready to rule that I'm going to deem the presence of those actual project reports for the Little River Hydrological Study and the Bates Nordic Training Center necessary to evaluate the competence and qualifications of this particular witness with reference to his testimony as an expert on the Intervale site.

MR. KAFIN: I don't think any counsel in the room has raised that issue.

THE HEARING OFFICER: I have.

MR. KAFIN: Can we cross those bridges when we come to them rather --

MS. NICHOLS: Mr. Hearing Officer --

THE HEARING OFFICER: Counselor, you have just come to the bridge. The Hearing Officer wishes to see the project reports on those studies before we reconvene for the next series of hearings and I want Mr. Boiteau and if Mr. Foster has got similar studies,available for further cross-examination or examination by the witness. Now, if counsel for the applicant wishes to make a similar application, we may very well have to suspend with these witnesses. Go ahead, Ms. Nichols.

THE HEARING OFFICER: Yes, we're going to cut the recess short. We're going to go back on the record. The Hearing Examiner has some questions.

Mr. Boiteau, with reference to the Bates Nordic Training Center, the report you prepared for Sasaki Associates was eventually reduced to writing, was it not?

THE WITNESS: Yes, it was.

THE HEARING OFFICER: How many pages did it consist of, approximately?

THE WITNESS: No more than a dozen or two.

THE HEARING OFFICER: No more than 24 pages?

THE WITNESS: That's correct.

THE HEARING OFFICER: Typed on one side or two sides?

THE WITNESS: I would say one side. The primary result of that was the preparation of an application to the State of Maine.

THE HEARING OFFICER: But your report consisted of no more than 24 pages, right?

THE HEARING OFFICER: Would you consider it too heavy a burden to carry those 24 pages with you to this hearing?

THE WITNESS: No, I would not.

THE HEARING OFFICER: All right. Now, with reference to the Little River Hydrologic Study, approximately what was the size of the written materials that you prepared?

THE WITNESS: I would estimate approximately 100 to 150 pages.

THE HEARING OFFICER: Of printed or typed on one side or on two sides?

THE WITNESS: Printed on two sides.

THE HEARING OFFICER: All right, a total of 300 pages of text material?

THE WITNESS: No, excuse me, I -- I would like to change that to -- the entire report consisted of approximately 100, 150 pages total, typewritten pages on two sides so --

THE HEARING OFFICER: All right, fine. Of which your contribution was less than the 150 pages?

THE WITNESS: No, my contribution

THE WITNESS: In what way?

THE HEARING OFFICER: Do you consider them similar in any way?

THE WITNESS: No, I do not.

THE HEARING OFFICER: All right. Did you consider sediment, erosion, sewage treatment and contamination of the Grand River in that project?

THE WITNESS: Yes, we did.

THE HEARING OFFICER: All right, and was the report of that project reduced to writing?

THE WITNESS: The -- we did preliminary investigations regarding that which resulted in the generation of memoranda regarding recommendations for sediment control. However, the primary thrust of this project was the preparation of construction documents for the construction of a Riverfront Park, plans, specifications and estimate.

THE HEARING OFFICER: All right. And those plans and specifications considered the mitigation of damage to the river from erosion and

THE HEARING OFFICER: More or less than 10 pounds?

THE WITNESS: Less than 10 pounds.

THE HEARING OFFICER: All right, more or less than five pounds?

THE WITNESS: Less than five pounds.

THE HEARING OFFICER: Even including a solid tube carrying case for them?

THE WITNESS: That's correct.

THE HEARING OFFICER: All right. Would it be too much weight for you to carry to bring those to this hearing?

THE WITNESS: No, they would not be.

THE HEARING OFFICER: All right. Now, with reference to the State University of New York at Buffalo, did you consider any area of the State University on or near any river or body of water?

THE WITNESS: Yes, I did.

THE HEARING OFFICER: And did you again consider the erosion and sediment control

six hundred pages.

THE HEARING OFFICER: All right. That's an application -- that's a document approximately the size of this application?

THE WITNESS: More than one document.

THE HEARING OFFICER: More than one document. Altogether they amount to a stack approximately the size of this document?

THE WITNESS: Possibly.

THE HEARING OFFICER: All right, and would you estimate for us to the best of your ability approximately how much they weigh?

THE WITNESS: I could only guess that it possibly could weigh possibly five pounds or more.

THE HEARING OFFICER: All right, under ten?

THE WITNESS: Possibly.

THE HEARING OFFICER: All right. Would it be too difficult to carry them to a hearing of this kind?

THE WITNESS: Collectively?

THE HEARING OFFICER: Assuming that

you had a briefcase to put them in?

THE WITNESS: Yes, I could.

15/1 THE HEARING OFFICER: O.K. Was the Hingham Landing Project associated with any body of water?

THE WITNESS: Yes, it was.

THE HEARING OFFICER: What body of water, river, lake, pond?

THE WITNESS: Tidal -- excuse me, wetlands area.

THE HEARING OFFICER: Tidal wetland?

THE WITNESS: Yes, it was.

THE HEARING OFFICER: O.K. Did you consider sedimentation, erosion and storm water management in that study?

THE WITNESS: Yes, I did.

THE HEARING OFFICER: Was that study reduced to writing?

THE WITNESS: Yes.

THE HEARING OFFICER: Or any written document?

THE WITNESS: Yes, it was.

remember the other number?

MS. NICHOLS: 615?

THE HEARING OFFICER: Well, any provisions of the rules and regulations of the State of Vermont considering environmental impact assessment?

THE WITNESS: Yes, it was.

THE HEARING OFFICER: All right, and did you submit a report thereon?

THE WITNESS: Yes, we did.

THE HEARING OFFICER: All right, and was that project ever completed?

THE WITNESS: No, it was not.

THE HEARING OFFICER: All right. Was the report accepted or rejected by the appropriate Vermont agencies?

THE WITNESS: It was accepted.

THE HEARING OFFICER: And approved?

THE WITNESS: I -- approved? Final approval? You talking about acceptance of the application itself or final approval of the plan?

THE HEARING OFFICER: No, final

and was that work reduced to writing or written form by way of reports or otherwise?

THE WITNESS: Yes, it was.

THE HEARING OFFICER: And approximately what was the total of that writing?

THE WITNESS: Report approximately 100 pages.

THE HEARING OFFICER: One hundred pages, weighing less than a pound?

THE WITNESS: Approximately, yes.

THE HEARING OFFICER: All right. With reference to your project entitled Johnny Cake in Burlington, Connecticut, was that project associated with any natural body of water?

THE WITNESS: Yes.

THE HEARING OFFICER: And did you prepare waste water and sediment and erosion control and hydrologic design considerations for that project?

THE WITNESS: Yes, I did.

THE HEARING OFFICER: Did you reduce them to writing?

THE WITNESS: Yes, I did.

THE HEARING OFFICER: And approximately what was the total size of all the writing?

THE WITNESS: I would have to estimate 50 pages or so.

THE HEARING OFFICER: Less than the weight of a dozen eggs?

THE WITNESS: I would think so, yes.

THE HEARING OFFICER: All right. Now, the Lewis-Medfield Project in Medfield, Massachusetts, I understand from your biography here you considered geohydrological investigations and analysis for waste water disposal. Did that involve a natural body of water?

THE WITNESS: Several, yes.

THE HEARING OFFICER: Did it also involve groundwater recharge and/or possible contamination?

THE WITNESS: Yes, it did.

THE HEARING OFFICER: And did you prepare a written report of that work?

THE WITNESS: Yes, I did.

THE HEARING OFFICER: All right. Was it the river that runs through Lexington?

THE WITNESS: Yes, it was.

THE HEARING OFFICER: All right, rather famous river, wasn't it? The work you did -- did the work you did involve any consideration of sediment and erosion control and possible contamination of the river?

THE WITNESS: Yes, it did.

THE HEARING OFFICER: And did you submit a written report or project consideration for that project?

THE WITNESS: We did.

THE HEARING OFFICER: And how large was that report?

THE WITNESS: I would estimate between 25 and 50 pages.

THE HEARING OFFICER: Roughly the weight of a dozen eggs or less?

THE WITNESS: Yes.

THE HEARING OFFICER: By the way, with reference to that project, was it completed?

THE WITNESS: I believe it was, yes.

THE HEARING OFFICER: All right. And, therefore, I can assume that your report was accepted?

THE WITNESS: Yes.

THE HEARING OFFICER: And acted upon?

THE WITNESS: Yes.

THE HEARING OFFICER: And approved by the appropriate state agencies?

THE WITNESS: I don't believe it was submitted for state approval, no.

THE HEARING OFFICER: All right. What about the Brightman Street Bridge in Fall River and Somerset. Did that involve a bridge over a river?

THE WITNESS: Yes, it did.

THE HEARING OFFICER: And did it involve a bridge over the Fall River?

THE WITNESS: Yes, it did.

THE HEARING OFFICER: Is that a large river?

THE WITNESS: Yes, it is.

THE HEARING OFFICER: Is that

river and the considerations involved in your investigation of the environmental impact in the bridge relocation in any way similar to your investigations with reference to the west branch of the Ausable here?

THE WITNESS: Yes, it is.

THE HEARING OFFICER: And in what way -- what area and what way are they similar?

THE WITNESS: Similar in size and similar in that they are both adjacen: to proposed construction sites and development disturbances would occur adjacent to them.

THE HEARING OFFICER: Has that project been completed?

THE WITNESS: No, it has not.

THE HEARING OFFICER: Has the report been accepted or approved?

THE WITNESS: Yes, it has.

THE HEARING OFFICER: Has it been approved by any state agency?

THE WITNESS: Yes, it has.

THE HEARING OFFICER: Has it been approved by any federal agency such as the

Department of Transportation? Is this a federally aided highway?

THE WITNESS: Yes, it is.

THE HEARING OFFICER: And they have approved it?

THE WITNESS: Yes, they have.

THE HEARING OFFICER: Have they incorporated your report in any environmental impact statement?

THE WITNESS: Yes, they have.

THE HEARING OFFICER: Has the environmental impact statement reached any final stage?

THE WITNESS: No.

THE HEARING OFFICER: Is it in the draft stage?

THE WITNESS: Yes, it is.

THE HEARING OFFICER: Have any public hearings been held thereon?

THE WITNESS: Yes.

THE HEARING OFFICER: Has the time for public comment been completed?

THE WITNESS: Yes, there has.

THE HEARING OFFICER: Have objections been raised to your report and study thereon?

THE WITNESS: There have.

THE HEARING OFFICER: Have thos objections been considered by the appropriate agencies for whom you considered the report, prepared the report?

THE WITNESS: They have.

THE HEARING OFFICER: Have you modified your work thereon?

THE WITNESS: We have not.

THE HEARING OFFICER: How large is that report?

THE WITNESS: Oh, it -- excuse me, I would estimate approximately 500 pages.

THE HEARING OFFICER: All right. And was that report incorporated in its entirety in the environmental impact statement?

THE WITNESS: It was.

THE HEARING OFFICER: Did you prepare the environmental impact statement?

THE WITNESS: Portions.

THE HEARING OFFICER: How large is

the entire environmental impact statement?

THE WITNESS: I would estimate approximately 500 pages.

THE HEARING OFFICER: That's about the size of the application before us in these hearings?

THE WITNESS: Yes.

THE HEARI NG OFFICER: And you would estimate about the s ame size and weight?

THE WITNESS: Yes.

THE HEARING OFFICER: All right. What about the Lawrence Transportation Improvements in Lawrence, Massachusetts? Did that study involve any consideration of the effects on any natural body of water?

THE WITNESS: It did.

THE HEARING OFFICER: And was -- what natural body of water?

THE WITNESS: The Lawrence --

THE HEARING OFFICER: Is it the Lawrence Pond?

THE WITNESS: The Merrimac River.

THE HEARING OFFICER: That, by the way, is the river that runs through Lexington, isn't it?

THE WITNESS: Yes.

THE HEARING OFFICER: The study -- withdrawn. Did the study lead to the preparation of an environmental impact statement?

THE WITNESS: It did.

THE HEARING OFFICER: And were these prepared for state or federal agencies?

THE WITNESS: They were.

THE HEARING OFFICER: Were they accepted by the state and federal agencies involved?

THE WITNESS: Yes.

THE HEARING OFFICER: Has the federal agency prepared an environmental impact statement pursuant to the provisions of the National Environmental Protection Act of 1969 as amended?

THE WITNESS: Yes.

THE HEARING OFFICER: Has the report reached the final stage?

THE WITNESS: I do not believe so, no.

THE HEARING OFFICER: Has the draft stage reached public hearing?

THE WITNESS: Yes, it has.

THE HEARING OFFICER: Have comments been received thereon?

THE WITNESS: Yes.

THE HEARING OFFICER: Have comments been directed to your work thereon?

THE WITNESS: Yes.

THE HEARING OFFICER: Have you

reviewed the comments?

THE WITNESS: Yes.

THE HEARING OFFICER: Have you made any modifications in your report as a result of the comments?

THE WITNESS: No, I have not.

THE HEARING OFFICER: Have the comments or has any party challenged the report thereon?

THE WITNESS: Portions I was responsible for or the entire impact statement?

THE HEARING OFFICER: Portions you were responsible for?

THE WITNESS: I do not believe so, no.

THE HEARING OFFICER: All right. Has the project been completed or commenced --

THE WITNESS: No.

THE HEARING OFFICER: Commenced or completed?

THE WITNESS: No, it has not.

THE HEARING OFFICER: How large was that report?

THE WITNESS: Several hundred pages.

THE HEARING OFFICER: And approximately how large was the entire environmental impact statement of which it became a part?

THE WITNESS: Maybe three or four -- oh, my responsibility?

THE HEARING OFFICER: No, the report.

THE WITNESS: The whole -- the whole impact statement was approximately 3- or 400-pages.

THE HEARING OFFICER: That's smaller than the application before us here.

THE WITNESS: Yes.

THE HEARING OFFICER: If we were to take all of these documents that you have prepared and we were to place them on a shelf side by side as books are lined up on a shelf with the exception of that portion which is reduced to maps and carried in a map case or in the appropriate role, approximately what distance would you estimate the shelf would fill?

THE WITNESS: Two to three feet.

THE HEARING OFFICER: Two to three feet. In the course of your regular professional activities as a registered civil engineer and your undergraduate education, you've had occasion to conduct field surveys using instruments, the eye and other technical means, have you not?

THE WITNESS: Yes.

THE HEARING OFFICER: And you've had occasion in the field to estimate distances, have you not?

THE WITNESS: Yes.

THE HEARING OFFICER: And you've been reasonably successful in those estimates, are you not?

THE WITNESS: Yes.

THE HEARING OFFICER: And we can assume as a matter of professional competence that when you say it's approximately no more than three feet, it's approximately no more than three feet. Would it take an entire trailer-truck to carry all the documents you've prepared to this hearing?

THE WITNESS: No, it would not.

THE HEARING OFFICER: Would it take

a very large station-wagon?

THE WITNESS: No, it would not.

THE HEARING OFFICER: Would it even take a vehicle much larger than a 2-door sedan?

THE WITNESS: No, it would not.

THE HEARING OFFICER: Could you put them all in a Volkswagen?

THE WITNESS: Possibly.

THE HEARING OFFICER: Even a Beetle?

THE WITNESS: Possibly.

THE HEARING OFFICER: All right. I ask the project applicants, at their own expense, to produce those documents with the cooperation of this witness. In the event you have a witness to produce who does require an entire trailer-truckload to produce his documents, I will take that into consideration. I think we have sat through two-and-a-half days of argument on something which is of concern to us, yes, but which all the parties have blown way out of proportion. We have just wasted forty minutes to establish that we're talking about three feet of documents, one of which is extremely relevant to this

particular hearing. I want to examine the study on the Brightman Street Bridge as the Hearing Officer, because I think it bears on the testimony of this particular witness to some very critical issues on this project, and testimony dealing with site selection, which is the subject matter of these hearings intimately involved with the possibility for contamination and damage to the west branch of the Ausable River, which is critical to a great many activities here. Now, if we are going to be handicapped, Ms. Nichols, in proceeding because we don't have these documents but if you've got anything to add to my analysis of the witness' work, you're free to go ahead. Otherwise I'd appreciate it if you'd continue your cross-examination, recognizing that he will produce other documents or I'm going to strike all his testimony.

MS. NICHOLS: Mr. Hearing Officer, at the point where you began examination on the additional items in this selected project's list, we were in the middle of a short recess to allow consultation.

THE HEARING OFFICER: Yes. You

want to take that recess now? We're going to take five minutes.

MS. NICHOLS: If it please the Hearing Officer.

THE HEARING OFFICER: We'll take more than that.

MR. KAFIN: Before you do that, Mr. Hearing Officer, we have the Brightman Street Bridge report.

THE HEARING OFFICER: All right, we'll reconvene at noon. Let the record indicate that we are dealing with a document that in my capacity as a human being who has carried groceries on occasion both in and out of supermarkets, I would estimate it weighs less, considerably less, than a half-a-dozen eggs and perhaps as much as two apples.

MR. JONES: What's the cholesterol count, Mr. Hearing Examiner?

THE HEARING OFFICER: I am unaware of its cholesterol count but it has no page numbers. It has an index, however, and I would estimate it's approximately 25 pages long and I

would think that it is not beyond the capacity of any of the representatives of the applicant to carry.

We will take a recess 'til noon. It's 11:55.

(Whereupon a short recess was taken.)

THE HEARING OFFICER: All right, all, let us reconvene at 12:04. Ms. Nichols?

MS. NICHOLS: Yes, Mr. Hearing Officer. The Adirondack Council at this time would like to -- will reserve making a motion on the qualifications of this witness, a motion to disqualify, pending an opportunity to examine the relevant documents if the Hearing Officer will so indulge us, and we would further like to request that we be granted the opportunity under the circumstances that in the event we have additional cross-examination based upon these documents that we have the right to request that the Hearing Officer recall this witness subject -- per examination on those issues.

THE HEARING OFFICER: I will so rule.

MS. NICHOLS: Thank you, sir.

BY MS. NICHOLS:

Q. All right, Mr. Boiteau, for the purpose of this cross-examination I'm going to be going in a chronological but serial fashion through the pages for which the -- your counsel has indicated you

were responsible in the application. Now, beginning with page II -- that's II-7, you indicate in this response to the Agency's request for information on surface water, that the proposed Olympic facilities and alternate sites are located within the Lake Champlain drainage basin. You further indicate that that basin drains approximately 28,000 or 2800 square miles. Now, with somewhat more specificity than 2800 square miles, which sub-drainage basin are we talking about here?

A. Sub-drainage basin would be the west -- the Ausable drainage basin.

Q. And is there a sub-designation within that for this particular stream?

A. Yes, the west branch of the Ausable River.

Q. The drainage basin then is the west branch of the Ausable. Did you, in the course of preparing this information for this application, have any occasion to ascertain the size of the drainage basin for the west branch of the Ausable River?

A. Yes, I have.

Q. And what is the size of that?

A. Approximately 116 square miles.

the general vicinity of the -- of the site in question and the characteristics of the over bank area adjacent to the channel, proper in order to determine extent of flooding.

THE HEARING OFFICER: Ms. Nichols, excuse me just a moment. If you're going to proceed through this in chronological order, I would like to interrupt. There are a couple questions that I have.

MS. NICHOLS: Surely, sir.

THE HEARING OFFICER: Is there any map that you've prepared which indicates the extent of the drainage basin for the west branch of the Ausable River?

THE WITNESS: I haven't -- I did not personally prepare a map.

THE HEARING OFFICER: Well, is there any available?

THE WITNESS: Yes, there is.

THE HEARING OFFICER: All right. Can we ask that it be produced and identified and given an exhibit number and made a part of the record?

thereon?

THE WITNESS: There is.

THE HEARING OFFICER: All right. I ask that that be given the next chronological exhibit number. Now, is the west branch of the Ausable River tributary to any other river?

THE WITNESS: To the Ausable River.

THE HEARING OFFICER: All right, and is the Ausable River tributary to any other river?

THE WITNESS: It is not.

THE HEARING OFFICER: All right. Is the west branch of the Ausable River a primary, secondary, tertiary, quaternary or what kind of tributary?

THE WITNESS: The Ausable River?

THE HEARING OFFICER: The west branch is what kind of tributary to the Ausable?

THE WITNESS: It would be a secondary.

THE HEARING OFFICER: All right. And the Ausable is not tributary to any other --

THE WITNESS: It's tributary to

Lake Champlain.

THE HEARING OFFICER: Ah! All right. And it's a primary tributary to Lake Champlain.

THE WITNESS: That's right.

THE HEARING OFFICER: That makes the west branch of the Ausable a secondary tributary to Lake Champlain.

THE WITNESS: Yes, it is.

THE HEARING OFFICER: All right, go ahead, Ms. Nichols.

BY MS. NICHOLS:

Q. In the course of preparing this information, what kind -- you indicated you did work with the headwaters of the Ausable or the west branch of the Ausable. Did you have any occasion to examine the classification of the west branch of the Ausable for any purposes, any -- strike that. Let me try it again. Let me start another one. In the course of preparing this application with reference to the west branch of the Ausable, did you have occasion to learn if there were any classifications of this water body --

A. Yes.

Q. -- by the State?

A. Yes.

Q. What classification is this, if you know?

A. It's a "C" classification.

THE HEARING OFFICER: Indicating what?

THE WITNESS: Indicating that its highest and best use is for water contact recreation, fishing.

THE HEARING OFFICER: All right.

Did you, in the course of your regular professional activities have any occasion to investigate the chemical and physical characteristics of the west branch of the Ausable River at the site?

THE WITNESS: Are you referring to actual sampling?

THE HEARING OFFICER: Studies, samples, I don't care what.

THE WITNESS: Yes, referencing existing studies that have been done, yes.

THE HEARING OFFICER: What's the most recent date of the most recent study?

THE WITNESS: The Lake Cham . . . the Water Management Plan, Water Quality Management Plan of the Lake Champlain Basin done by the Department of Environmental Conservation.

THE HEARING OFFICER: When?

THE WITNESS: April of 1975.

THE HEARING OFFICER: All right. To your knowledge, have there been any updates -- don't give it back yet -- since then?

THE WITNESS: Not to my knowledge, no.

THE HEARING OFFICER: All right, and the specific portions of the Water Quality Management Plan for the Lake Champlain Basin prepared by the Office of Program Development, Planning and Research and Division of Pure Waters of the New York State Department of Environmental Conservation that you're referring to are pages 106 to 130?

THE WITNESS: It would be starting at Page 100 in this report.

THE HEARING OFFICER: And proceeding --

THE WITNESS: Proceeding through Page 107, plus certain appendices pertaining to back-up information.

THE HEARING OFFICER: And as far as you're concerned, you've examined those particular pages and those appendices and relied thereon in the rendering of your own opinion and conclusions?

THE WITNESS: I have.

THE HEARING OFFICER: And to the best of your knowledge, are they accurate?

THE WITNESS: Yes.

THE HEARING OFFICER: Were they necessary for you to come to the conclusions you made in your report?

THE WITNESS: Yes.

THE HEARING OFFICER: All right. I'm going to ask the -- would you testify substantially in accordance therewith substantively if you were asked to do so on direct examination?

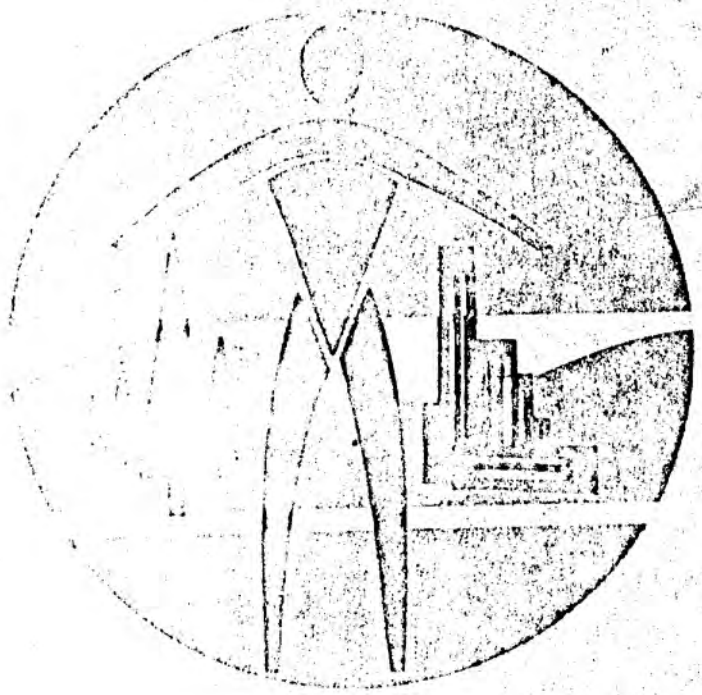
THE WITNESS: Yes.

THE HEARING OFFICER: All right. I'm going to ask the Reporter to spread those pages upon the record as if they were direct testimony by the witness if called as a witness by the Hearing Examiner and I'm going to ask the New York State Department of Environmental Conservation to submit a copy of the entire report and I'll ask that it be marked with the next chronological exhibit number at this time in this hearing today.

Does the --

MR. GITLEN: Excuse me, which report exactly?

THE HEARING OFFICER: This is the Water Quality Management Plan for the Lake Champlain Basin Number 10-00 prepared in April 1975 by the Office of Program Development, Planning and Research and Division of Pure Waters of the New York State Department of Environmental Conservation. The applicant, I'm asking to reproduce the pages referred to by the witness and submit them to the Reporter so that she can make them a part of the record for today.



New York State Department of Environmental Conservation

SUMMARY OF THE
WATER QUALITY MANAGEMENT PLAN
FOR THE LAKE CHAMPLAIN BASIN
(10-00)

Office of Program Development, Planning and Research

And

Division of Pure Waters

April 1975

This is New York State's official plan for pollution abatement in the Lake Champlain Planning Area (10-00) prepared by the Department of Environmental Conservation pursuant to Section 303(e) of the Federal Water Pollution Control Act Amendments of 1972. The plan identifies pollution problems, treatment needs, priorities, schedules for pollution abatement and governs State and Federal grants-in-aid for any future treatment works and all permits issued under the National Discharge Elimination System. This is one of a series of basin water quality plans being prepared statewide to coordinate and direct the State's water quality decisions on a river basin scale and to assure wise use and management of several billion dollars in public funds for pollution abatement during the next five years.

State and local policies and plans on detailed aspects of water quality, water resources and land use management have been factored into this plan. Inputs and contributions have been received from every level of government, private concerns and from the general public at local public hearings.

Portions of the plan may be revised at any time based on public comments and concerns, changes in priority and needs for pollution abatement. This will include a continuous updating as permits are issued and as changes result in effluent limit evaluations and compliance schedules. The plan will also be revised, updated and aired at a public hearing in its entirety every five years. At that time, accomplishments will be assessed and compared with State and National pollution control goals. Operating efficiencies of facilities will be examined.

SUMMARY

The major findings of this report are as follows:

1. There are 34 significant discharges in the Lake Champlain Basin. Twenty one of these are municipal while three are a combination of municipal and industrial wastes. The other 10 discharges are industrial, but only two of them have a critical impact on water quality. These discharges affect about 175 miles of basin waters.
2. Fourteen of the 34 discharges currently meet State stream standards in accordance with the 1972 Amendments to the Federal Water Pollution Control Act. The remaining 20 discharges are unabated polluters and are required by law to provide the necessary degree of treatment by July 1, 1977.
3. Twelve of the unabated polluters have made substantial progress towards abatement.
4. Of the streams which receive discharges, 151 miles are "Effluent Limiting" while about 24 miles are "Water Quality Limiting". This does not include the waters of Lake Champlain.
5. The total cost of sewerage needs in the Lake Champlain Basin during the next five years is over 119 million dollars. Approximately 61.6 million of these dollars is needed for the construction of treatment and interceptor facilities with 87.5% of the cost supported by State and Federal grants. The remaining 57.9 million dollars is needed for new collection sewers and for rehabilitation. Since the cost of collection systems is currently not certified by State and

Federal grants, the solution of some local health and sanitary problems may be beyond local capabilities. Individual locality needs are illustrated in Table D.

Water Resources

The Basin is one of the most water-rich areas in a state known for its plentiful water resources. Water uses include:

1. Water Orientated Recreation - Water is by far the most important recreational resource of the region. Fishing, boating, and swimming are the major recreational uses.
2. Water Supply - Both municipal and industrial water supplies have proven more than adequate in the past. The most serious water supply problem is the inadequacy of about 25% of the individual wells for farms and private dwellings.
3. Power Development - There are few hydroelectric plants in the Lake Champlain Basin. Most of these are on the Saranac River.
4. Navigation - The Champlain Canal provides a navigable route from the Hudson River to Canadian waterways.
5. Irrigation - Water used for irrigation in the Basin is not that significant.

Existing Water Quality Problems

In general, water quality throughout the Lake Champlain Drainage Basin is very good. Problem areas that do exist include: the mouth of the Saranac River and Cumberland Bay near Plattsburgh, Lake Champlai at the International Paper Company outfall and the outlet of Ticonderog Creek, the Chubb River and the West Branch of the Ausable River at

Lake Placid, Ticonderoga Creek itself, the Champlain Barge Canal at Whitehall, Sumner Brook at Bloomingdale, Behan Brook at Dannemora, and parts of the Little Ausable and Mettawee Rivers.

The City of Plattsburgh's sewage treatment plant discharges its effluent into the Saranac River at its mouth. The plant's construction was completed at the end of 1973. Operational difficulties are still present but improved operation is expected. This will enhance water quality at the mouth of the Saranac. The International Paper Company's treatment plant (1970) has and should continue to improve water quality in the Ticonderoga-Crown Point area. The long standing court case involving New York, Vermont, and the Company was settled late in the summer of 1974 by agreement among the parties. Certification of permit limits is awaiting an adjudicatory hearing, Since the International Paper Company has discontinued discharging into Ticonderoga Creek water quality has significantly improved. Completion of the demolition of the old plant and the installation of sewerage treatment facilities for Ticonderoga (V) will further improve water quality. This project is on the State's ranked list.

Wastes from the influx of people to the Lake Placid area for the 1980 Winter Olympics could overload the stream assimilative capacities of the Chubb River and the West Branch of the Ausable River. A stream survey for the area is a high priority project and an environmental assessment of the effects of the Olympics is also proposed. It is hoped that these projects will provide the information needed to provide proper facilities.

Water Quality of the Champlain Barge Canal at Whitehall is marred by raw discharges. The necessary treatment facilities are proposed

through a project on the State's ranked list. Sumner Brook presently receives Bloomingdale's (V) raw wastes. Sewerage facilities are planned and the project is of high priority but progress unsatisfactory. Behan Brook does not have the capacity to handle Dannemora's (V) waste. It will be relieved of the village's discharge upon completion of the combined project with Clinton Prison.

At low flow conditions, the Little Ausable River cannot assimilate Peru's existing waste discharge. Improved facilities are required and greater than "Best Practical Treatment" (BPT) must be considered for this waste source. Granville's (V) case is similar. Improved treatment efficiencies are required and with increased pollutant loads to the stream greater than "BPT" must be considered.

Detailed information regarding the above, and other discharges is contained in the body of the report.

Plans for Pollution Abatement

Tables A and B list the waste sources, priorities, and plans for pollution abatement through 1979.

These plans include the results of all water quality planning activities in the Basin and are consistent with the results of other applicable resource planning activities such as those for water resources and land use management.

Following implementation of these plans, post operative monitoring and analysis will be necessary to assure that waste treatment works are operating efficiently and are meeting pollution abatement goals and objectives. Dischargers are required to sample their effluents daily and report to the Region Office. The DEC Region 5 office perform additional samplings on their investigations. Reconnaissance field surveys are also performed.

Effluent Load Requirements

The waste assimilative capacity and effluent load requirements for discharges in the Lake Champlain Planning Area are shown in Table C. The reserve capacity of each stream segment is the difference between the total waste assimilative capacity and the permit limits cited in the Table.

Stream Monitoring Requirements

Plans for stream monitoring in the Lake Champlain Drainage Basin call for continuation of activities at the following stations:

10 L002 on Lake Champlain at Rouses Point

10 L030 on Lake Champlain at Crown Point

10 P201 on Lake George at the Narrows between Mohican and Juanita Islands

10 1010 on the Saranac River at Treadwell Mills

10 1015 on the Ausable River at Ausable Chasm

10 1039 on the Bouquet River at Willsboro

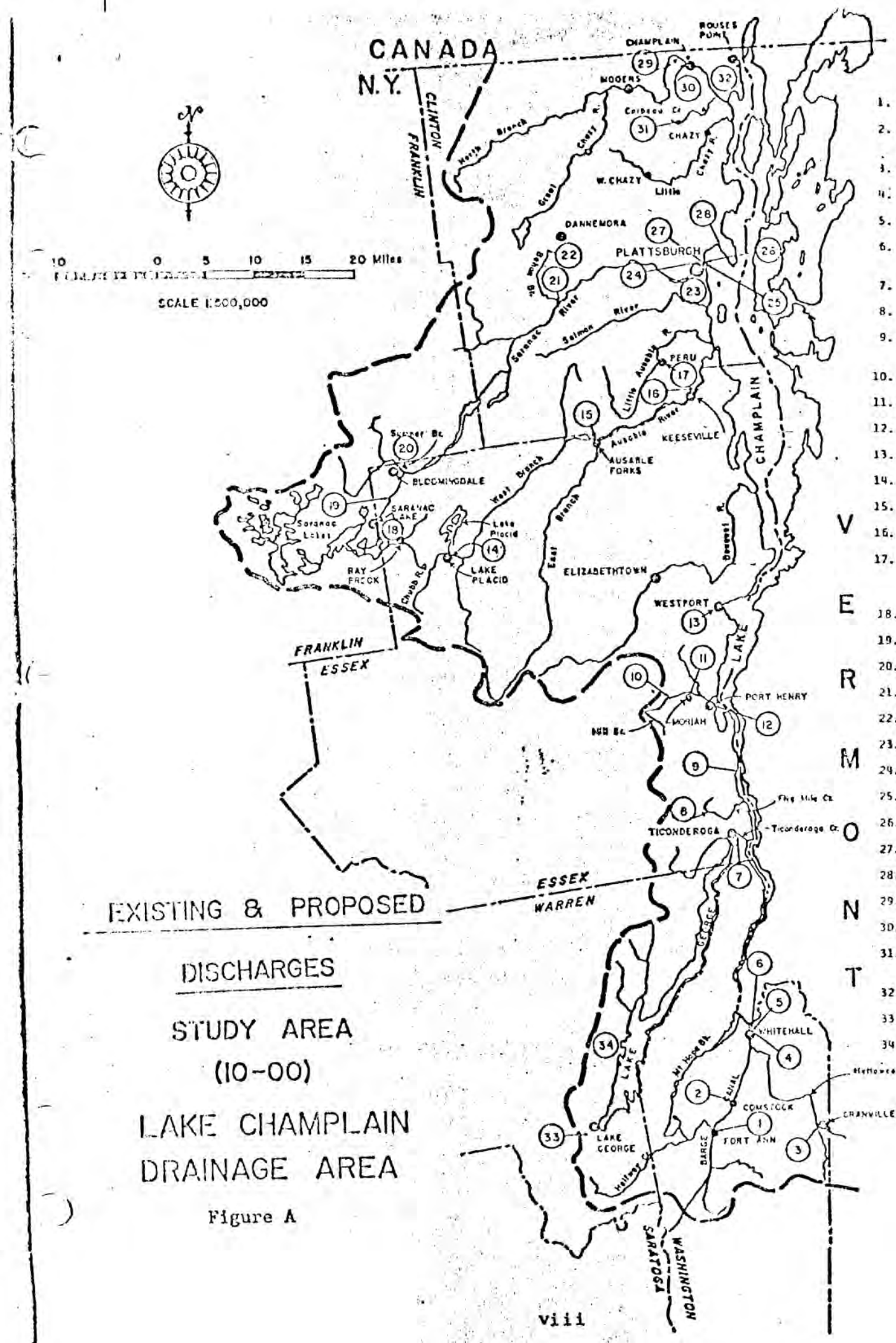
10 1050 on Ticonderoga Creek at Ticonderoga

EPA Monitoring stations near the International Paper Company's outfall, at the mouth of Ticonderoga Creek, and on the Champlain Barge Canal at Whitehall.

Two sites should be strongly considered for future monitoring. The first is located at the mouth of the Saranac River at Cumberland Bay. A station here would monitor Plattsburgh's discharge and its effects on surrounding water quality. The magnitude of this discharge is large in comparison with others in the Basin (about 16 MGD) and the effects of its combined municipal-industrial wastewater on

area water quality are unknown, and should be monitored. The second site would involve monitoring the water quality of the Chubb River and the West Branch of the Ausable River in the Lake Placid area. The influx of people and the construction necessary for the 1980 Winter Olympics could significantly affect water quality in this area that is so dependent on its natural beauty.

Since EPA requires that each "Water Quality Limiting" segment maintain a monitoring and surveillance program, two other areas may need consideration for a station. Both the Granville area and the Peru area may be "Water Quality Limiting". Hydrologic information via stream surveys is necessary to definitely determine segment classification.



EXISTING & PROPOSED DISCHARGES

STUDY AREA (10-00)

LAKE CHAMPLAIN DRAINAGE AREA

Figure A

Table A - Lake Champlain Drainage Basin
Waste Sources and Abatement Status

D = Design
A = Actual

WASTE SOURCE AND PROJECT #	RECEIVING STREAM AND CLASSIFICATION	MILE POINT	TREATMENT FACILITIES	YEAR BUILT	REMOVAL EFFICIENCY (%)	RAW LOADING (#/DAY)	FLOW (MGD)	COMMENT
Fort Ann (V) Washington Co.	Champlain Barge Canal - Class C	11.3	Primary, Imhoff Tank	1939	D - BOD = 35 A - BOD = 55	A - BODu = 200 A - NOD = 100	D = 0.08	***Upgrade of STP to Secondary Treatment presently unranked. Listed as a minor polluter under voluntary abatement acti Progress is unsatisfactory.
Great Meadows Correctional Inst. Comstock C-36-555	Champlain Barge Canal - Class C	7.6	High Rate Trickling Filter	-	D - BOD = 86 A - BOD = 89	D - BODu = 3150 D - NOD = 270	D = 0.36	** Permit effluent limits not available.
Granville (V) C-36-466 Washington Co.	Mettawee R. - Class C(T)	19.3	High Rate Trickling Filter	1972	D - BOD = 80 A - BOD = 72	D - BODu = 1630 D - NOD = 975 A - BODu = 2000 A - NOD = 1200	D = 0.65 A = 0.8	**Elimination of infiltration should be investigated. Upgrade STP to include grit chamber and Purfax Process. This should eliminate odor problems. (Plans received 3/75).
Whitehall (V) Washington Co.	Mettawee R. Champlain Barge Canal - Class C	0.8	Raw	-	-	D - BODu = 2500 D - NOD = 1500 A - BODu = 1050 A - NOD = 500	D = 0.6 A = 0.4	**Proposed STP listed under project # C-36-699 is ranked 66th on the Prior List. Listed as a polluter of normal importance under Commissioner's Orders to abate. Extended Aeration is propos Progress satisfactory.
D & H Railroad Whitehall (V) Washington Co.	Discharges into Whitehall System	-	Oil - Water Separator	-	-	Minimal BOD	-	*Need more information for evaluation a determination.
Mobil Oil Corp. Whitehall Washington Co.	Lake Champlain Barge Canal - Class C	-	-	-	-	-	-	*Comply by 7/1/75 to Sanitary Effluent Limitations of: 30 mg/l BOD5 & S.S. daily avg.; 200 MPN/100 ml; and storm Water Effluent Limitations of: 10 mg/l oil and grease.
Ticonderoga (V) Essex Co.	Ticonderoga Creek - Class D	1.5	Raw	-	-	D - BODu = 2000 D - NOD = 1000	D = 1.0	**Extended Aeration Plant proposed under Project # C-36-698. Under Commissione Orders to abate. A normal polluter wi satisfactory compliance. Engineering Report approved by NYSDEC, storm sewers investigation pending. Ranked 101 on Priority List.

TABLE A (con't.)

WASTE SOURCE AND PROJECT #	RECEIVING STREAM AND CLASSIFICATION	MILE POINT	TREATMENT FACILITIES	YEAR BUILT	REMOVAL EFFICIENCY (%)	RAW LOADING (#/DAY)	FLOW (MGD)	COMMENT
Ametada Hess Corp. Ticonderoga Essex Co.	Five Mile Creek - Class C(T)	— 3.0	Oil - Water Separator	-	-	Minimal BOD		*Used for bulk storage.
International Paper Company Ticonderoga (V) Essex Co.	Lake Champlain - Class B Lat 43°55'25" N Long73°24'12" W	-	Activated Sludge	1970	D - BOD - 90 A - BOD - 94	D - BOD_5 = 26,500 D = 21.1 A - BOD_5 = 30,000 A = 16.9 Suspended Solids Draft Permit Effluent Limitations = 8900 #/day (63 mg/l)		**Effluent limitations of 4400#/day BOD_5 and 1400#/day TKN certified to EPA under enclosed Draft Permit regulations and compliance schedule. Permit awaiting adjudicatory learning. Court case settl by agreement of parties.
Moriah S.D. 1 Essex Co.	Mill Brook - Class C (T)	2.9	Primary, Imhoff Tank	1943	D - BOD - 35 A - BOD - 5	A - BODu = 100 A = 0.045 A - NOD = 55 D - BODu = 220 D = 0.08 D - NOD = 110		***Proposed project to construct STP at Moriah Center to serve SD 1 and 2, the hamlet of Moriah Center and the tributar area. Under this proposal, the hamlet o Moriah Corners and the area between Mori Corners and the Village of Port Henry wi be served by the Village STP. Existing Moriah Center STP will be employed in Trickling Filter design while the Wither STP will be abandoned. 2020 design flow 0.3 MGD.
Moriah S.D. 2 Essex Co.	Trib. to Mill Brook - Class D (at m.p. 5.0)	1.8	Primary, Imhoff Tank	1949	D - BOD - 35 A - BOD - 20	A - BODu = 210 A = 0.10 A - NOD = 110 D - BODu = 450 D = 0.17 D - NOD = 230		
Port Henry (V) C-36-180 Essex Co.	Lake Champlain - Class A Lat 44°02'18" N Long73°27'26" W	-	Primary, Imhoff Tank (prechlorination)	1965	D - BOD - 35 A - BOD - 40	A - BODu = 475 A = 0.2 A - NOD = 270 D - BODu = 950 D = 0.4 D - NOD = 540 (Year-1990)		***Upgrade STP to secondary treatment is under voluntary schedule. Listed as a minor polluter. No project number for upgrade - No action.
Westport (V) Essex Co.	N.W. Bay of Lake Champlain - Class A Lat 44°11'30" N Long73°26'0" W	-	Extended Aeration	1970	D - BOD - 90 D - NOD - 95 A - BOD - 98 A - NOD - 95	A - BODu = 240 A = 0.09 A - NOD = 140 D - BODu - 320 D = 0.12 D - NOD = 190 (Year-2020)		*Abated. Check operations to see that BPT is maintained.
Lake Placid (V) C-36-442 Essex Co.	Chubb R. (Trib. to W. Branch of the Ausable at m.p. 23.7)	1.3	Activated Sludge	1972	D - BOD - 85 D - NOD - 50 A - BOD - 90 A - NOD - 50	A - BODu = 5000 A = 1.8 A - NOD = 2700 D - BODu = 7000 D = 2.5 D - NOD = 3700 (Year-1990)		*Abated. Check operations to see that BPT is maintained. Determine if additional facilities are needed for the 1980 Olympics.

TABLE A (con't.)

WASTE SOURCE AND PROJECT #	RECEIVING STREAM AND CLASSIFICATION	MILE POINT	TREATMENT FACILITIES	YEAR BUILT	REMOVAL EFFICIENCY (%)	RAW LOADING (#/DAY)	FLOW (MGD)	COMMENT
Ausable Forks Clinton - Essex Co.	Ausable R. - Class C	20	No Treatment	-	-	D - BODu - 1000 D - NOD - 550	D - 0.25 (Year-1995)	***Proposed Extended Aeration Plant is l under Project # C-36-872. Marginal polluter under voluntary schedule but pliance is unsatisfactory. Hamlet is situated in two counties - red tape d
Keeseville (V) C-36-356 Clinton - Essex Co.	Ausable River - Class C	7.5	High Rate Trickling Filtration	1971	D - BOD - 85 A - BOD - 93	A - BODu - 510 A - NOD - 300 D - BODu - 800 D - NOD - 450	A - 0.20 D - .35 (Year-2000)	*Abated. Check operation to see that BPT is maintained.
Peru Clinton Co.	Little Ausable R. - Class C	8.8	Primery, Imhoff Tank	1939	D - BOD - 35 A - BOD - 30	A - BODu - 485 A - NOD - 290 D - BODu - 1130 D - NOD - 675	A - 0.194 D - 0.45	**Interceptor and STP upgrade under Pro # C-36-776 is unranked. Engineering has been changed and wastewater facil Report is being prepared.
Ray Brook Rehab. C. Essex Co.	Ray Brook (Trib. to Saranac R. at m.p. 61.8) - Class C	1.0	Trickling Filtration	-	-	D - BODu - 375 D - NOD - 225	D - 0.15	*Abated. Check operations to see that is maintained.
Saranac Lake (V) Franklin - Essex Co.	Saranac River - Class C	56.4	Activated Sludge	1973	D - BOD - 80-90 D - NOD - 50 A - BOD - 95 A - NOD - --	D - BODu - 5000 D - NOD - 3000 A - BODu - 3000 A - NOD - 1800	D - 2.0 A - 1.2	*Abated. Check operations to see that is maintained. Improve collection sy to delete excessive storm water and infiltration. Plant should be adequa for influx of people for Olympics.
Bloomingdale (V) Essex Co.	Sumner Brook (Trib. to Saranac R. at m.p. 52.0) - Class D	0.6	Raw	-	-	D - BODu - 250 D - NOD - 130	D - 0.1 (Year-2020)	***Under Commissioner's orders as a poll of normal importance. Project # C-3 is ranked 68th on the Priority List. Engineer has cancelled. EFC contrac reactivated. Legal action recommend

TABLE A (con't.)

WASTE SOURCE AND PROJECT #	RECEIVING STREAM AND CLASSIFICATION	MILE POINT	TREATMENT FACILITIES	YEAR BUILT	REMOVAL EFFICIENCY (%)	RAW LOADING (#/DAY)	FLOW (MGD)	COMMENT
Clinton Prison Dannemora (V) Clinton Co.	Saranac R. - Class C	19.5	Primary, Imhoff Tank	-	D - BOD = 35 A - BOD = 25 Combined Plant --	A - BODu = 1000 A - NOD = 600 D - BODu = 2330 D - NOD = 1300	** A = 0.7 D = 1.5 (Design Year 2020)	Combined plant for Village and Prison under Project # C-36-770 is ranked 122nd on priority list. Primary plant the Village STP will be ungraded to 1.5 MGD Trickling Filtration Plant with discharge into Prison outfall. Village is presently listed as a polluter of major importance. Proposed project has satisfactory compliance progress. Agreement with Department of Correction executed.
Dannemora (V) C-36-153 Clinton Co.	Behan Brook (Trib. to Saranac R. at M.P. 19.7) - Class C(T)	3.8	Primary, Imhoff Tank	1964	D - BOD = 35 A - BOD = 15	A - BODu = 515 A - NOD = 300	** A = 0.35	
N.Y. Gas and Electric Clinton Co.	Saranac River - Class C	1.8	Lagoon	-	-	Minimal BOD	-	* Minimal effect on receiving waters. Treating oil seepage waste.
Plattsburgh (C) C-36-521 Clinton Co.	At the confluence of the Saranac R. and Lake Champlain - Class C	0.1	Activated Sludge	1973	D - BOD = 90 D - NOD = 50 A - BOD = 50 A - NOD = --	A - BODu = 88,000 A - NODD= 7500 D - BODu = 70,000 D - NOD = 7500	A = 16-20 D = 16 (Year-2000)	** New Plant serves: Diamond National Imperial Paper, Georgia Pacific, the Air Force Base, SUNYP, Route 3 S.D., Cumberland Corners S.D., and the city itself. Plant is overloaded and provides only 50% removal. Infiltration and industrial flows should be monitored and combined sewerage should be checked for wastewater characteristics.
Metropolitan Petroleum Plattsburgh Clinton Co.	Lake Champlain - Class B	-	Oil - Water Separator	1971	-	Minimal BOD	A = 0.001	* Effluent limitations of draft permit include an average discharge of 10 mg/l oil and grease while max discharge limitations will be set when sufficient operational data is available. No discharge of floating solids or visible foam in other than trace amounts. 18 month compliance schedule set up.

TABLE A (con't.)

WASTE SOURCE AND PROJECT #	RECEIVING STREAM AND CLASSIFICATION	MILE POINT	TREATMENT FACILITIES	YEAR BUILT	REMOVAL EFFICIENCY (%)	RAW LOADING (#/DAY)	FLOW (MGD)	COMMENT
Shell Oil Co. Plattsburgh Clinton Co.	Lake Champlain - Class B	-	Oil - Water Separator	-	-	Minimal BOD	A = 0.003	*Effluent limitations of draft permit include an average discharge of 10 mg/l oil and grease while max discharge limitations will be set when sufficient operational data is available. No discharge of floating solids or visible fo in other than trace amounts 18 month compliance schedule set up.
Texaco Inc. Plattsburgh Clinton Co.	Lake Champlain - Class B	-	Oil - Water Separator	-	-	Minimal BOD	A = 0.13	*Effluent limitations of draft permit include an average discharge of 10 mg/l oil and grease while max discharge limitations will be set when sufficient operational data is available. No discharge of floating solids or visible fo in other than trace amounts 18 month compliance schedule set up.
Champlain Park S.D. C-36-750 Clinton Co.	Lake Champlain, Cumberland Bay - Class B Lat 44°42'56"N Long73°24'46"W		Primary, Imhoff Tank	1956	D - BOD = 35 A - BOD = 15	A - BODu = 125 A - NOD = 70 D - BODu = 410 D - NOD = 200	A = 0.08 D = 0.16 (Year-2000)	**Upgrade plant to Secondary Treatment un Project # C-36-750. Plans and Specs approved. Forwarded to EPA 4/74 and awaiting funding. Plant is designed fo Trickling Filtration Process. Project ranked 59th on Priority List. Federal grant offer issued 10/74.
Chazy (T) C-36-871 Clinton Co.	Little Chazy R. - Class C(T)	5.0	-	-	-	-	-	***Proposed STP under Project Number C-36-871 is presently unranked. School has a small extended aeration plant.
Yankee Milk Champlain (V)	Great Chazy R. - Class C	6.8	NONE	-	-	Depends on anticipated production. Permit limit BOD_5 = 1100	2.0	From mid-Sept. to mid-May operates as a milk transfer station. From mid-May to mid-Sept. operates as a milk processing plant. Transfer station waste go to Village. Preliminary facility report received 12/74.
Champlain (V) C-36-139 Clinton Co.	Great Chazy R. - Class C	5.1	Primary, Imhoff Tank	1964	D - BOD = 35 A - BOD = 20	A - BODu = 425 A - NOD = 240 D - BODu = 525 D - NOD = 300	A = 0.250 D = 0.275 (Year-1990)	* Upgrade STP to Secondary Plant under Project # C-36-870 is presently unra listed as a polluter of major importa with unsatisfactory compliance progre

TABLE A (con't.)

WASTE SOURCE AND PROJECT #	RECEIVING STREAM AND CLASSIFICATION	MILE POINT	TREATMENT FACILITIES	YEAR BUILT	REMOVAL EFFICIENCY (%)	RAW LOADING (#/DAY)	FLOW (MGD)	COMMENT
								Progress report due 6/1/75.
Ayerst Lab. Inc. Chazy (T)	Trib. of Corbeau Creek - Class D Lat44°53'37" Long73°28'12"		Dual Aerated Lagoon with Final Settling	-	-	-	A = 0.02 D = 0.05	** Itermittant stream standards apply. Effluent limit 0.8 #/day BOD_5. Actual effluent = 9.6 #/day BOD_5.
Rouses Pt. (V) C-36-27 Clinton Co.	At the confluence of Lake Champlain and the Richelieu R. - Class A La44°59'59" Lo73°21'15"		Primary, Imhoff Tank	1959	D - BOD = 35 A - BOD = 15	A - BODu = 1000 A - NOD = 575 D - BODu = 1200 D - NOD = 680	A = 0.60 D = 0.65 (Year-1990)	*** Upgrade STP to Secondary Plant under Project # C-36-873 is presently unranked. Listed as a polluter of major importance with unsatisfactory compliance progress
Lake George (V) C-36-194 Warren Co.	Percolation Beds	-	High Rate Trickling Filter	1965	D - BOD = 80-90 A - BOD = 83	D - BODu = 4000 D - NOD = 2400 A - BODu = 1000 A - NOD = 600	D = 1.8 A = 0.45	* Possible extension of facilities to include Caldwell S.D. Proposal exists to pump sewerage to be treated at Glens Falls as part of the Hudson River Big Bend Project or expand to tertiary treatment.
Bolton (T) C-36-14 Warren Co.	Percolation Beds	-	High Rate Trickling Filter	1961	D - BOD = 80-90 A - BOD = 89	D - BODu = 900 D - NOD = 540 A - BODu = 300 A - NOD = 180	D = 0.30 A = 0.12	* Comp. Study recommends an extension of sewerage system and enlargement of STP. Also proposed as part of above Big Bend Project.

TABLE B

ABATEMENT PLAN

Source	Flow-MGD	Abatement Requirement	Project Status	COMPLIANCE SCHEDULE FY 1975	FY 1976	FY 1977	FY 1978	FY 1979
Municipalities								
Champlain Park SD	0.16	STP-UP; OS	Project forwarded to EPA. Federal Grant Offer Issued 10/74.	STP-UP; OS	Begin Construction	Complete Construction	Monitor Operation	- - -
Whitehall (V)	0.6	INT; FM STP; PS	DEC WWFR approved Ranked #66 (Comm. orders)	Estimated 2/75 Letter of Intent, I/I Study, Grant Application. During 1975 Construct Int; FM.	Construct STP; PS	Complete Construction	Monitor Operation	- - -
Bloomingdale (V)	0.1	INT; PS; FM; STP; OS	Engineer has cancelled. EFC Contract reactivated. Not viable for 1975 funding. Ranked #68. Legal action recommended.	EAS, I/I; Letter of Intent; Grant Application.	Begin Construction of STP	Complete Construction	Monitor Operation	- - -
Ticonderoga (V)	1.0	STP; INT	Plans and Specs being revised. Project redefined. Ranked #101 (Comm. orders)	EAS, NPDES, I/I Study, Submittal of Grant Application Package to EPA.	Begin Construction	Complete Construction	Monitor Operation	- - -

566-E

TABLE B

ABATEMENT PLAN

Source	Flow-MGD	Abatement Requirement	Project Status	COMPLIANCE SCHEDULE FY 1975	FY 1976	FY 1977	FY 1978	FY 1979
Dannemora (V)	1.5	STP-Upgrade PS and OS	Ranked #122. DEC approved Agreement Executed with Dept. of Correction	Outfall sewer EAS; I/I; Letter of Intent	Begin Construction of STP & PS	Complete Construction	Monitor Operation	- - -
Plattsburgh (C)	16.0	Improve Operation of New Secondary Plant to BPT level of Treatment. Technical Advisory meetings currently being held, I/I Study & analysis of Wastewater Characteristics necessary.	Plant complete. No status on necessary studies.	Issue Industrial Waste Ordinance not later than 180 days after EDP. Provide Required Industrial Information & Interim Operational Plan. Include schedule of implementation.	Initiate Monitoring program. submit O&M progress reports.	Submit final plan describing abatement. Program 6 mos. prior to permit expiration. Attain BPT.	Maintain BPT. Monitor Operation.	- - -
Peru SD	0.45	STP-Upgrade	Unranked	Prepare O&M Plan to maximize Existing Operation at Minimum cost. Commence WWFR planning. Stream survey recommended.	Submit WWFR to attain BPT. I/I, EAS. Submit progress report.	Begin Construction	Complete Construction	Monitor Operatic

TABLE B

ABATEMENT PLAN

Source	Flow-MGD	Abatement Requirement	Project Status	COMPLIANCE SCHEDULE FY 1975	FY 1976	FY 1977	FY 1978	FY 1979
AuSable Forks (H)	0.25	Install Sewerage System. Provide BPT.	NONE	Commence wastewater facilities planning.	Submit WWFR to attain BPT. I/I, EAS.	Begin construction	Complete Construction	Monitor Operation
Moriah SD #1 & SD #2	0.3	Combined Upgrade Plant at Moriah Center. INT; STP-UP	Unranked	Prepare O&M plan to maximize Existing Operation at Minimum cost. Commence WWFR planning.	Submit WWFR to attain BPT. I/I, EAS. Submit progress report every 9 mos.	Begin Construction	Complete Construction	Monitor Operation
Champlain (V)	0.275	STP-UP	Unranked	Prepare O&M plan, to maximize existing operation at Minimum cost. Commence WWFR planning.	Submit WWFR, I/I, EAS, progress report.	Begin Construction	Complete Construction	Monitor Operation
Rouses Point (V)	0.65	STP-UP	Unranked	"	"	"	"	Monitor Operation

566-G

TABLE B

ABATEMENT PLAN

Source	Flow-MGD	Abatement Requirement	Project Status	COMPLIANCE SCHEDULE FY 1975	FY 1976	FY 1977	FY 1978	FY 1979
Fort Henry (V)	0.4	STP-UP	Unranked	"	"	Begin Construction	Complete Construction	Monitor Operation
Chazy (T)	-	Install Sewerage System. Provide BPT	None, unranked	Commence facilities planning.	Submit WWFR to attain BPT. Submit I/I, EAS, progress report.	Begin Construction	Complete Construction	Monitor Operation
Fort Ann (V)	0.08	Upgrade STP	None	Prepare O&M plan to maximize existing level of treatment at minimum cost. Commence WWFR Planning.	"	Begin Construction	Complete Construction	Monitor Operation
Great Meadows Correctional Inst. (Comstock)	0.36	Upgrade STP pending BPT requirements	None	Monitor Operation	If necessary improve existing operation to meet BPT.	- - -	If BPT is still not met, prepare plans for upgrade.	Upgrade plant if necessary.
Granville (V)	0.65	Improve Removals to BPT level	None	Investigate infiltration & add grit chamber & Purfax Process. Plans received 3/75. Maximize existing cost 3/30/75. Stream	Monitor Operation. Submit Final ER 3/30/76	Upgrade STP if Necessary. Monitor Operation.	Monitor Operation	- - -

566-H

TABLE B

ABATEMENT PLAN

SOURCE	FLOW -MGD-	ABATEMENT REQUIREMENT	PROJECT STATUS	COMPLIANCE SCHEDULE FY 1975	FY 1976	FY 1977	FY 1978	FY 1979
Claymore SD Putnam Willsboro Elizabethtown Morrisonville SD Schuyler Falls South Plattsburgh Essex Loon Lake Estates Vermontville Area Lake Colby - Trudeau Rd. Mooers			Possible Future Projects. Too soon to give compliance schedules. Most of these municipal areas do not discharge into surface waters.					
Lake Placid (V)	2.5	None, abated	Completed	Continue current operation Stream survey recommended.	Commence Necessary planning for 1980 Winter Olympics.	Continue Planning	Prepare Facilities, if necessary	- - -
Lake George (V)	1.8	None, abated	Completed	Continue current operation	- - -	- - -	- - -	- - -
Bolton (T)	0.3	None, abated	Completed	Continue current operation	- - -	- - -	- - -	- - -
Ray Brook Rehabilitation Center	0.15	None, Abated	Completed	Continue Current operation	- - -	- - -	- - -	- - -
Saranac Lake (V)	2.0	None, Abated	Completed	Continue current operation	- - -	- - -	- - -	- - -
Keeseville (V)	0.35	None, abated	Completed	Continue current operation	- - -	- - -	- - -	- - -
Westport (V)	0.12	None, abated	Completed	Continue Current operation	- - -	- - -	- - -	- - -

TABLE B

ABATEMENT PLAN

SOURCE	FLOW -MGD-	ABATEMENT REQUIREMENT	PROJECT STATUS	COMPLIANCE SCHEDULE FY 1975	FY 1976	FY 1977	FY 1978	FY 1979
Industries								
International Paper Co. (Ticonderoga)	Avg. 16.9 Max. 25.0	Provide BPT, especially suspended solids. req.	Permit extended. Cert. of draft recommended. Application for permit Awaiting adjudicatory hearing.	Compliance Schedule: 1. Submit Engineering report thatisacceptable to the Commissioner by 4/1/75. 2. Submit Final Plans and Specs. acceptable to the Commissioner by 8/1/75. 3. Commence construction of additional treatment facilities by 10/1/75 4. Complete construction of additional treatment facilities by 5/1/77. 5. Attain acceptable effluent limitations by 7/1/77.				
Imperial Paper Co. (Plattsburgh)	1.09	Comply with Industrial waste ordinance when issued by Plattsburgh. within 180 days of EDP.	Draft Permit.	Meet stipulations of contract with Plattsburgh & permit interim operational Plan.	Monitor & continue proper operation.	---	---	---
Diamond National (Plattsburgh)	1.30	"	"	"	"	---	---	---
Georgia Pacific (Plattsburgh)	5.22	Comply with Industrial waste ordinance when issued by Plattsburgh within 180 days of EDP.	Draft permit.	Meet stipulations of contract with Plattsburgh permit Interim operational plan.	Monitor & continue proper operation.	---	---	---

The three plants, according to draft permit, must:
1. monitor average and peak flows
2. monitor designated effluent parameters
3. analyze raw water intake

TABLE B

ABATEMENT PLAN

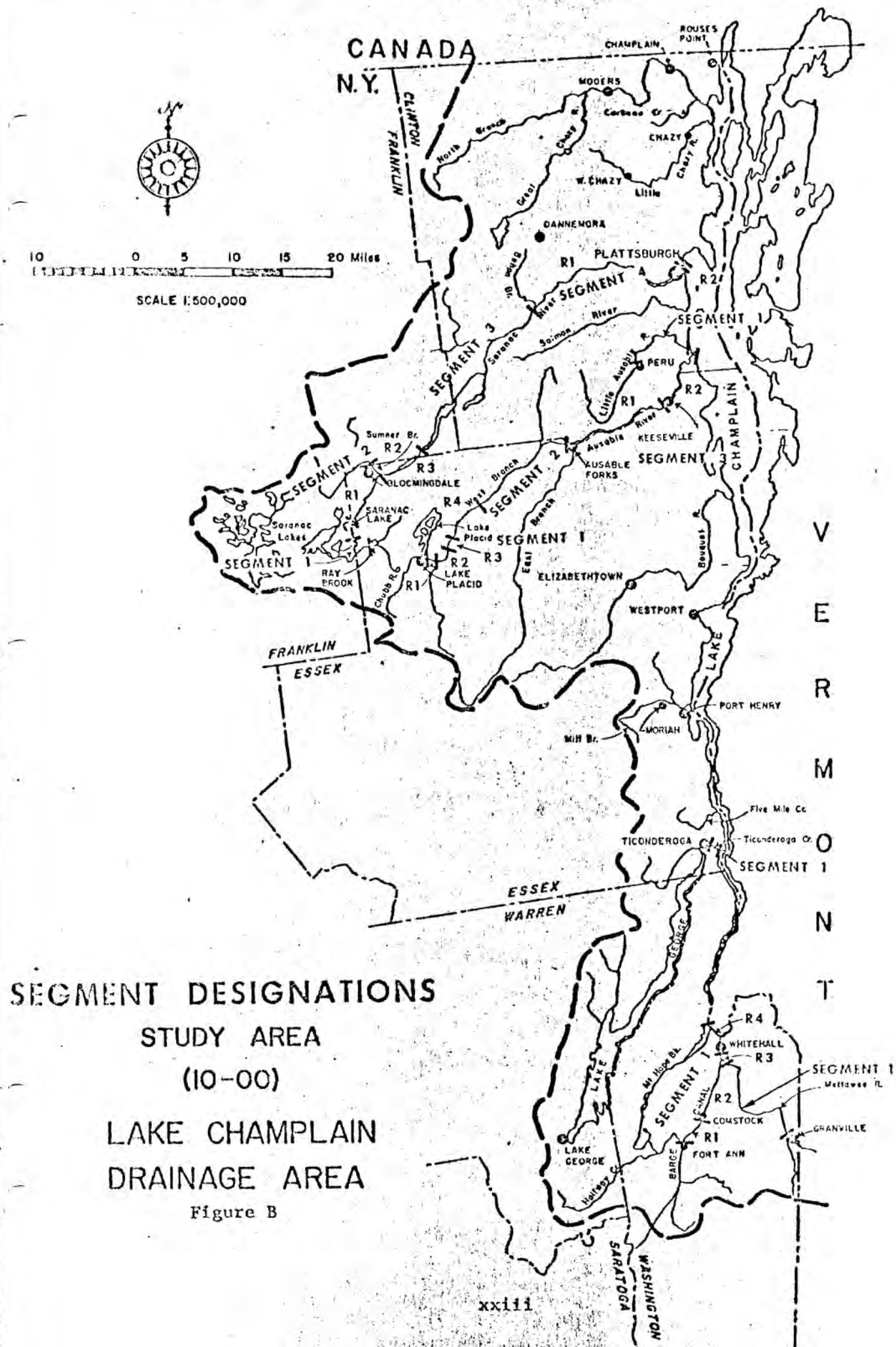
SOURCE	FLOW -MGD-	ABATEMENT REQUIREMENT	PROJECT STATUS	COMPLIANCE SCHEDULE FY 1975	FY 1976	FY 1977	FY 1978	FY 1979
Yankee Milk (Champlain - V)	2.0	Provide BPT facilities for seasonal dairy operations.	Project received 12/74.	Comply with Interim permit limits by 4/30/76. Engineering report & plans & specs.	Construct facilities.	Comply with Required effluent limitations. During period of 4/30/76, to 3/31/79	- - -	- - -
Ayerst Lab. Inc. (Trib. of Corbeau Cr.)	0.019	Meet effluent Requirements & monitoring requirements specified in permit.	Under interim schedule.	Achieve effluent limitations by 6/1/75. Provide progress report, and monitoring data.	- - -	- - -	- - -	- - -
Republic Steel Corp. (Moriah)	Q003= 0.142 Q004= 0.056	Draft permit assumes that Fe Effluent Req. are adequate for WQS	Permitted to discharge. Draft permit.	Monitor Discharges monthly	- - -	- - -	- - -	- - -
D & H Railroad (Whitehall)	-	Need more information for schedule determination	-			Schedule to be complete by 6/30/77		
Mobil Oil Corp. (Whitehall)	-	Oil-water separation for storm water discharge. Sanitary discharge must meet BPT requirements.	-	Comply with effluent limitations by 7/1/75 (Draft Permit). Draw up contingency plan for oil spill removal.	- - -	Schedule to be complete by 6/30/77	- - -	- - -
Amerada Hess Corp. (Ticonderoga)	Aug. 0.002 Max. 0.006	Meet BPT requirements. Provide oil spill prevention control & counter measure plans.	Certification Draft permit public notice	Draft permit calls for compliance with BPT within 18 mos. of EDP.	- - -	- - -	- - -	- - -

566-K

TABLE B

ABATEMENT PLAN

SOURCE	FLOW -MGD-	ABATEMENT REQUIREMENT	PROJECT STATUS	COMPLIANCE SCHEDULE FY 1975	FY 1976	FY 1977	FY 1978	FY 1979
Interpace Corp. (Willsboro)	0.01	Adhere to effluent temperature limitations for non-contact cooling water discharge (100 tons/day Wollastonite is produced.)	Draft permit	Monitor 1/qtr.	- - -	- - -	- - -	---
N.Y. Gas & Electric (Plattsburgh)	-	Treating oil seepage waste - minimal BOD	Treatment via Lagoon	- - -	- - -	- - -	- - -	- - -
Metropolitan Petroleum (Plattsburgh)	Avg. 0.001 Max. 0.01	Oil-water separator. Done 11/10/71.	Certification recommended. Draft permit. Public notice.	If conditions of Part A "Draft Permit" cannot be met immediately then a period not exceeding 18 months from the EDP will be permitted to achieve compliance. Monitor every 15 minutes while discharging. Provide oil spill prevention control and counter measure plans.				
Texaco Inc. (Plattsburgh)	Avg. 0.13 Max. 1.6	Additional Treatment needed for or to maintain WQS/BPT.	Certification. Draft permit. Public notice.					
Shell Oil Co. (Plattsburgh)	Avg. 0.0028 Max. 0.011	"	"			"		



SEGMENT DESIGNATIONS
STUDY AREA
(10-00)
LAKE CHAMPLAIN DRAINAGE AREA

Figure B

Table C
Waste Load Allocation
Mettawee River - Champlain Barge Canal

SEGMENT/SOURCE	FLOW-MGD*	UNTREATED LOAD LBS/DAY BODu	NOD	TOD	BPT EFFLUENT LOAD LBS/DAY BODu	NOD	TOD	WASTE ASSIMILATION CAPACITY AND LOAD ALLOCATION LBS/DAY BODu	NOD	TOD	PERMIT LOAD LBS/DAY BODu	NOD	TOD
Segment #1 (From Fort Ann STP to Bay area north of Whitehall)													
Fort Ann (Reach #1, Fort Ann - Comstock)	0.08	200	100	300	30	60	90	-	-	270	30	60	90
Comstock (Reach #2, Comstock - Confluence of Mettawee and Canal)	0.36	3150	270	3420	225	270	495	-	-	1200	225	270	495
(Reach #3, confluence - Whitehall)	-	-	-	-	-	-	-		***		-	-	-
Whitehall (Reach #4, Whitehall - Bay Area)	0.6	1500	900	2400	225	450	675	-	-	2000	225	450	675
Segment #2 (From Granville STP to Confluence of Mettawee River and Canal)	0.65	1630	975	2605	244	490	734	-	-	750	244	490	734

* Design Flows

*** TOD concentration at the confluence of the Mettawee and the Canal is limited to 4.5 mg/l.

TABLE C

WASTE LOAD ALLOCATION

TICONDEROGA CREEK

SOURCE	FLOW-MGD	UNTREATED LOAD LBS/DAY			BPT EFFLUENT LOAD LBS/DAY			WASTE ASSIMILATION CAPACITY AND LOAD ALLOCATION LBS/DAY			PERMIT LOAD LBS/DAY			Future Load - Oxidation Ditch Removals (LBS/DAY)		
		BODu	NOD	TOD	BODu	NOD	TOD	BODu	NOD	TOD	BODu	NOD	TOD	BODu	NOD	TOD
Segment Ø1 from Ticonderoga STP to Lake Champlain (t=0.7 day)	1.0	2500	1500	4000	375	750	1125			2500	375	750	1125	250	375	625

Table C
Waste Load Allocation
Ausable River

SEGMENT/SOURCE	FLOW-MGD	UNTREATED LOAD LBS/DAY BODu	NOD	TOD	BPT EFFLUENT LOAD LBS/DAY BODu	NOD	TOD	WASTE ASSIMILATION CAPACITY AND LOAD ALLOCATION LBS/DAY BODu	NOD	TOD	PERMIT LOAD LBS/DAY BODu	NOD	TOD
Segment #1 from Lake Placid STP to Flume @ m.p. 12.5 (Reaches 1-4)	2.5	7000	3700	10,700	935	1875	2810	*	*	*	*	*	*
	2.5	7000	3700	10,700	935	1875	2810	-	-				
Segment #2 from Flume to AuSable Forks	-	-	-	-	-	-	-	-	-	-	-	-	-
Segment #3 from AuSable Forks to Lake Champlain													
Reach #1 from AuSable Forks STP to Keeseville STP	0.25	625	385	1000	95	190	285	-	-	5200	95	190	285
	0.25	625	385	1000	95	190	285	-	-	5200	95	190	285
Reach #2 from Keeseville STP to mouth at Lake Champlain	0.35	805	485	1290	120	240	360	-	-	7300	120	240	360
	0.35	805	485	1290	120	240	360	-	-	7300	120	240	360

* Capacity is limited to approximately 750 #/day TOD under the most conservative conditions where the dissolved oxygen goes to sag in the Chubb River. A stream survey and a determination of K_1 and K_2 are necessary to obtain a definitive load allocation.

Table C
Waste Load Allocation
Little Ausable River

SEGMENT/SOURCE	FLOW-MGD	UNTREATED LOAD LBS/DAY			BPT EFFLUENT LOAD LBS/DAY			WASTE ASSIMILATION CAPACITY AND LOAD ALLOCATION LBS/DAY			PERMIT LOAD LBS/DAY.		
		BODu	NOD	TOD	BODu	NOD	TOD	BODu	NOD	TOD	BODu	NOD	TOD
Segment #1 From Peru STP to mouth of Little Ausable t = 2.8 days	0.45	1130	675	1805	169	338	507	-	-	159	-	-	159

Table C
Waste Load Allocation
Saranac River

SEGMENT/SOURCE	FLOW-MGD	UNTREATED LOAD LBS/DAY BODu	UNTREATED LOAD LBS/DAY NOD	UNTREATED LOAD LBS/DAY TOD	BPT EFFLUENT LOAD LBS/DAY BODu	BPT EFFLUENT LOAD LBS/DAY NOD	BPT EFFLUENT LOAD LBS/DAY TOD	WASTE ASSIMILATION CAPACITY AND LOAD ALLOCATION LBS/DAY BODu	WASTE ASSIMILATION CAPACITY AND LOAD ALLOCATION LBS/DAY NOD	WASTE ASSIMILATION CAPACITY AND LOAD ALLOCATION LBS/DAY TOD	PERMIT LOAD LBS/DAY BODu	PERMIT LOAD LBS/DAY NOD	PERMIT LOAD LBS/DAY TOD
Segment #1													
Saranac R. above Saranac L. (V)	0.15	375	225	600	57	114	171	480	300	780	57	114	171
Ray Brook	0.15	375	225	600	57	114	171	480	300	780	57	114	171
Rehab C.													
Segment #2													
Saranac R. from Saranac Lake STP to dam at Franklin Falls	2.0	5000	3000	8000	750	1500	2250	2400	1440	3840	750	1500	2250
Saranac Lake (V) Reach #1	0.10	250	130	380	38	75	113	480	250	730	38	75	113
Bloomingdale (V) Reach #2	2.1	5250	3130	8380	788	1575	2363	2880	1690	4570	788	1575	2363
Segment #3													
From Franklin Falls to m.p. 19.5	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA
Segment #4													
From m/p. 19.5 at Dannemora to mouth at Lake Champlain													
Reach #1 from m.p. 19.5 to Plattsburgh STP	1.5	2320	1300	3620	565	1125	1690	7600	4300	11,900	565	1125	1690
	1.5	2320	1300	3620	565	1125	1690	7600	4300	11,900	565	1125	1690
										46,700	6000	3750	9750
Reach #2 Plattsburgh STP to mouth of Saranac R.	16.0	70,000	7500	77,500	6000	3750	9750			46,700	6000	3750	9750
	16.0	70,000	7500	77,500	6000	3750	9750						

C

1974 NEEDS SURVEY

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF PURE WATERS
NEEDS SURVEY GROUP

DESCRIPTION OF CATEGORIES USED IN THE 1974 "NEEDS" SURVEY

CATEGORY I - Secondary Treatment and BPWTT - This includes costs for facilities which would provide a legally required level of "secondary treatment," or "best practicable wastewater treatment technology (BPWTT)." For the purposes of the Survey, BPWTT and secondary treatment were to be considered synonymous.

CATEGORY II - More Stringent Treatment - Costs reported in this category are for treatment facilities that must achieve more stringent levels of treatment. This requirement exists where water quality standards require removal of such pollutants as phosphorous, ammonia, nitrates, or organic substances.

CATEGORY III-A - Infiltration/Inflow Correction - This includes costs for correction of sewer system infiltration/inflow problems. Costs could also be reported for a preliminary sewer system analysis and for the more detailed Sewer System Evaluation Survey.

CATEGORY III-B - Major Sewer System Rehabilitation - Costs reported for this Category reflect replacement or major rehabilitation necessary to insure the total integrity and performance of the wastewater treatment works. Normal system operation and maintenance costs are not included as "Needs." Replacement is defined as construction of parallel sewers or sewers to perform the function of existing sewers where existing sewers are to be abandoned. Major rehabilitation is considered extensive repair of existing sewers beyond the scope of normal maintenance programs.

CATEGORY IV-A - New Collectors, etc. - This category consists of costs for construction of collector sewer systems designed to correct violations caused by raw discharges, seepage to waters from septic tanks and the like, and/or to comply with Federal, State or local actions.

CATEGORY IV-B - New Interceptors, etc. - This category consists of costs of new interceptor sewers and transmission pumping stations necessary for the bulk transport of wastewaters.

CATEGORY V - Correction of Combined Sewer overflows - Costs reported for this category are to prevent periodic bypassing of untreated wastes from combined sewers to an extent violating water quality standards or effluent limitations. It does not include treatment and/or control of stormwaters.

CATEGORY VI - Treatment and/or Control of Stormwaters - The costs reported for this category are for treatment and/or control of stormwaters. This includes the costs of abating pollution from stormwater run-off channelled through sewers and other conveyances used only for such run-off. The costs of abating pollution from stormwater channelled through combined sewers which also carry sewage are included in Category V. These costs are not available on a basin basis.

566-8

TABLE D

1974 NEEDS SURVEY DATA

LOCALITY	CATEGORY COSTS IN THOUSANDS OF JUNE 1973 DOLLARS							
	I*	II*	IIIA	IIIB	IVA	IVB*	V	TOTAL
Champlain (V)	1,181	0	0	0	0	0	0	1,181
Chazy (T)	678	0	0	0	1,335	90	0	2,103
Dannemora (T) S.D. #5	360	0	65	0	0	660	0	1,085
S.D. #4	0	0	0	0	0	0	0	0
Dannemora (V)	821	0	167	0	0	0	0	988
Keeseville (V)	0	0	0	0	0	0	0	0
Peru (T) Peru SD	864	0	17	0	0	66	0	947
Lake Shore SD	430	0	0	0	974	610	0	2,014
Plattsburgh (C)	8,250	0	200	7,835	0	2,389	11,040	29,714
Plattsburgh (T) Champlain Pk. S.D.	800	0	60	0	546	0	0	1,406
Morrisonville S.D.	1,000	0	0	0	630	3,400	0	5,030
Cliff Haven S.D.	0	0	80	0	568	165	0	813

* Categories currently eligible for federal funds under Public Law 92-500.

TABLE D

1974 NEEDS SURVEY DATA

LOCALITY	CATEGORY COSTS IN THOUSANDS OF JUNE 1973 DOLLARS							
	I*	II*	IIIA	IIIB	IVA	IVB*	V	TOTAL
Cumberland Corners S.D.	0	0	5	0	273	130	0	408
Route #3 S.D.	0	0	7	0	1,026	585	0	1,618
Cadyville S.D.	700	0	0	0	1,764	456	0	2,920
Plattsburgh Unsewered Area	0	0	0	0	0	0	0	0
W. Plattsburgh	0	0	0	0	164	382	0	546
Rouses Point	1,700	0	284	0	0	0	0	1,984
Schuyler Falls	677	0	0	0	983	328	0	1,988
Black Brook	677	0	40	0	770	810	0	2,297
Champlain (T)	1,080	0	0	0	0	0	0	1,080
Ellenburg (T)	576	0	0	0	688	1,845	0	3,109
Altona (T)	677	0	0	0	754	55	0	1,486
Ausable	0	0	0	0	0	0	0	0
Beekmantown (T)	562	0	0	0	1,092	164	0	1,818
Mooers (T)	547	0	0	0	246	328	0	1,121
Saranac (T)	0	0	0	0	0	0	0	0

* Categories currently eligible for federal funds under Public Law 92-500.

566-U

TABLE D

1974 NEEDS SURVEY DATA

LOCALITY	CATEGORY COSTS IN THOUSANDS OF JUNE 1973 DOLLARS							
	I*	II*	IIIA	IIIB	IVA	IVB*	V	TOTAL
Jay (T)	504	0	0	0	579	430	0	1,513
Bloomingdale (V)	0	0	0	233	0	0	0	233
Elizabethtown (V)	389	0	0	0	369	0	0	758
Lake Placid (V)	0	0	462	0	0	0	0	462
Moriah (T)	208	0	94	0	518	165	0	985
Port Henry (V)	638	0	18	0	0	0	0	656
Ticonderoga (T)	367	0	0	0	549	146	0	1,062
Ticonderoga (V)	2,132	0	442	372	913	1,242	1,785	6,886
Westport (V)	0	0	48	0	164	0	0	212
Willsboro (T)	576	0	0	0	1,285	369	0	2,230
Essex (T)	221	0	0	0	346	346	0	913
Westport (T)	0	0	0	0	0	0	0	0
North Elba (T)	0	0	0	0	0	0	0	0
Chesterfield (T)	576	0	0	0	405	756	0	1,737
Crown Point (T)	358	0	0	0	1,452	0	0	1,810
Elizabethtown (T)	0	0	0	0	0	0	0	0

* Categories currently eligible for federal funds under Public Law 92-500.

TABLE D

1974 NEEDS SURVEY DATA

CATEGORY COSTS IN THOUSANDS OF JUNE 1973 DOLLARS

LOCALITY	I*	II*	IIIA	IIIB	IVA	IVB*	V	TOTAL
Keene (T)	274	0	0	0	715	140	0	1,129
Lewis (T)	309	0	0	0	403	16	0	728
St. Armand (T)	0	0	0	0	0	0	0	0
Wilmington (T)	1,008	0	0	0	1,507	132	0	2,647
Harrietstown (T)	0	0	0	0	897	0	0	897
Saranac Lake (V)	0	0	110	0	0	0	0	110
Franklin (T)	0	0	0	0	0	0	0	0
Bolton (T)	0	2,558	105	0	2,233	973	0	5,869
Lake George (V)	0	800	5	1,000	0	0	0	1,805
Queensbury (T)	0	0	0	0	3,383	836	0	4,219
Queensbury SD	0	0	0	0	2,599	5,678	0	8,277
No. Queensbury SD	0	0	0	0	0	0	0	0
Lake George (T)	250	0	0	0	84	112	0	446
Hague (T)	302	0	40	0	0	0	0	342
Fort Ann (V)	0	0	90	100	0	0	0	190
Granville (V)								

* Categories currently eligible for federal funds under Public Law 92-500.

A-955

TABLE D

1974 NEEDS SURVEY DATA

LOCALITY	CATEGORY COSTS IN THOUSANDS OF JUNE 1973 DOLLARS							
	I*	II*	IIIA	IIIB	IVA	IVB*	V	TOTAL
Whitehall (V)	950	0	92	0	902	1,675	557	4,176
Granville (T)	360	0	0	0	165	385	0	910
North Granville	202	0	0	0	56	112	0	370
Granville-Remainder	0	0	0	0	0	0	0	0
Whitehall (T)	0	0	0	0	0	0	0	0
Dresden (T)	0	0	0	0	0	0	0	0
Fort Ann (T)	0	0	0	0	0	0	0	0
Hampton (T)	0	0	0	0	0	0	0	0
Hartford (T)	310	0	0	0	165	220	0	695
Putnam (T)	0	0	0	0	0	0	0	0
NYS Environmental Facilities Corp. Westport (V)	0	0	0	0	0	0	0	0
Bloomingdale (V)	289	0	0	0	0	198	0	487
Hudson River Big Bend, Warren Co. Out of Basin #10, but may incorporate Lake George and Bolton Landing.	18,300	0	0	0	0	16,538	0	34,838

* Categories currently eligible for federal funds under Public Law 92-500.

TABLE D

1974 NEEDS SURVEY DATA

LOCALITY	CATEGORY COSTS IN THOUSANDS OF JUNE 1973 DOLLARS							
	I*	II*	IIIA	IIIB	IVA	IVB*	V	TOTAL
NYS University Construction Fund S.U.C. at Plattsburgh	0	0	0	0	0	0	0	0
NYS Dept. of Correctional Services Clinton	0	0	20	0	0	0	0	20
Great Meadows	0	0	10	0	0	0	0	10
New York State Div. of Parks and Recreation Cumberland Bay	75	0	3	0	0	0	0	78
Sub - Total of Lake Champlain Basin Needs	31,878	3358	3,453	9,540	31,502	26,394	13,382	119,507

* Categories currently eligible for federal funds under Public Law 92-500.

THE HEARING OFFICER: Now, Mr. Boiteau, are the chemical and physical characteristics of the left branch of the Ausable River at the site of the project application contained in those pages you referred to or set forth on those pages?

THE WITNESS: They are discussed, yes.

THE HEARING OFFICER: All right. Would you summarize those physical and chemical characteristics for us at that point from that record referring to it if necessary to refresh your recollection?

MR. KAFIN: Mr. Hearing Officer, the chemical analysis in the application is Exhibit 771119:41.

THE HEARING OFFICER: O.K.

MR. KAFIN: Those are the pages to which we have assigned responsibility to Dennis Reinhardt.

THE HEARING OFFICER: O.K.

MR. KAFIN: Because they are in the area of the aquatic ecology and something in

which he is an expert.

THE HEARING OFFICER: In other words, this witness' testimony is only going to be limited to the aspects of channel morphology and hydrologic characteristics including the size of the drainage basin, yearly flows, flow recordings, peaks and hydrolic capacity --

MR. KAFIN: And related subjects.

THE HEARING OFFICER: Yes. Has a map been prepared indicating the channel morphology including the depth, width, relative extent of pools, ponds, riffles, falls and the like, substrate composition of the bed, the presence, number and size of islands, and bank stability?

THE WITNESS: No, it has not.

THE HEARING OFFICER: What about the -- have the hydrologic characteristics including the size of the drainage basin, the average yearly flow, the highest flows recorded, the low flow frequencies, the annual peak high flow, the magnitude and frequency of flooding and hydraulic capacities of the west branch of

the Ausable at the site been reported?

THE WITNESS: They have.

THE HEARING OFFICER: All right, and can we refer to them by exhibit number or by page number?

THE WITNESS: Page II, Page 11, Table SII-3.

THE HEARING OFFICER: Fine, that's Capital S, Roman II, hyphen, Arabic 3.

MR. KAFIN: That is also Exhibit 761119:14, number 14.

THE HEARING OFFICER: That's correct. All right, Ms. Nichols, go ahead. I'm sorry to interrupt.

MS. NICHOLS: Thank you, sir.

BY MS. NICHOIS:

Q. In the course of preparing the application information on the morphometric and hydrologic characteristics of the west branch of the Ausable, did you have occasion to examine the river?

A. Yes, I did.

Q. Did you have occasion to -- what are the characteristics of the river in general hydrologic terms?

A. It's a typical mountainous river, relatively steep slopes throughout, from its head waters down to the general area of this site. It becomes relatively sluggish through that area and down through the Village of Lake Placid and picked up in topography again. Characteristic of the river bank itself is bouldery cobbles and shallow to bedrock and the bottom is primarily lined with gravels and sand and boulders and the river velocity is generally swift throughout except in very flat gradient areas. That is generally through the village.

Q. Mr. Boiteau, I direct your attention to II-10, that's Table SII-2. Now --

THE HEARING OFFICER: That's

Exhibit 761119:13.

Q. (Continuing) Now, can you tell me what that exhibit purports to be?

A. This exhibit is a copy, river classifications in the Lake Placid Region, classification of surface waters relative to water quality.

Q. Now --

THE HEARING OFFICER: Excuse me. What was the source?

THE WITNESS: The source of this document was the Water Quality Management Plan for the Lake Champlain Basin.

THE HEARING OFFICER: All right. The exhibit we've previously referred to.

Q. And the source -- the source of that information in the Water Quality Management document, if you know?

A. Excuse me?

Q. That is, was this information -- was this table generated and classified for the DEC's Water Quality Management Study on the Lake Champlain Basin?

A. It was.

Q. And these classifications did not exist prior to the 1975 DEC Study, to your knowledge?

A. I believe -- I believe they did.

Q. On the lefthand side of the page at the top, there is under the heading, "Item Number 257" the waters Item Number C-25-26, named west branch of the Ausable River. Is that the water body about which or which flows adjacent to this site?

A. That's correct.

Q. And on the lefthand -- extreme lefthand side of that column, there is written on it in script different than the bulk of the print on the page, the number "C(t)". Do you see that?

A. Yes.

Q. Can you tell me what that means?

A. Someone wrote in here the classification of the stream C(t).

Q. Do you know what that classification means, what that is?

A. That's a "C" classification and the "t" I believe stands for trout waters.

Q. Trout waters. Did you, in the course of your study of the west branch of the Ausable River

for purposes of this application, have occasion to discuss the characteristics of the river with local people; that is, did you get any additional information about the characteristics of this stream?

A. Relative to water quality?

Q. Relative to water quality.

A. No, I did not.

Q. Is it a customary part of your preparation of information when you have an indication that waters are classified for some special purpose to explore further into the limiting features which that stream may have in terms of that resource classification?

A. The limiting features regarding water quality are very specifically defined by the Department of Environmental Quality Engineers -- The Department of Environmental Conservation.

THE HEARING OFFICER: Are you referring to the standards that are indicated in the final column in that table designated 761119:13, in this case standard "C?"

MS. NICHOLS: In part.

THE HEARING OFFICER: Are you?

THE WITNESS: I don't understand the question.

THE HEARING OFFICER: You -- you referred in your prior answer to specifics provided for by the Department of Environmental Conservation. Are you referring to the standards that are indicated in the final column of this table designated Exhibit 761119:13,in this case "C?"

THE WITNESS: Yes.

THE HEARING OFFICER: Are they published?

THE WITNESS: Yes.

THE HEARING OFFICER: Are you aware of them?

THE WITNESS: Yes, I am.

BY MS. NICHOLS:

Q. Does, in your awareness of these standards, the sub-classification as a "t" indicate anything of relevance in terms of the qualities of those waters?

A. Regarding trout designated waters, limiting

oxygen requirements would be higher for those designated streams rather than other streams with the same classification "C."

THE HEARING OFFICER: Isn't a critical limiting factor with reference to trout in particular reproduction in fast moving streams, siltation?

MR. KAFIN: Mr. Hearing Officer, to the extent this is a question about aquatic ecology --

MS. NICHOLS: It is not.

MR. KAFIN: -- it is within Mr. Reinhardt's capacity.

THE HEARING OFFICER: I'll sustain the objection. I'll rephrase the Hearing Examiner's question. I want you to assume that the presence of siltation degrades the quality of trout waters. Have you considered the extent of siltation that will occur in the west branch of the Ausable River at the site and below the site, "below" being downstream, as a result of the construction activities proposed in this application?

THE WITNESS: Regarding their

specific effect on trout in the stream?

THE HEARING OFFICER: No, regarding the extent and amount of siltation.

THE WITNESS: I have not personally, no.

THE HEARING OFFICER: In other words, then you've made no estimate of the extent of siltation, if any, that may occur?

THE WITNESS: I have not, no, personally.

THE HEARING OFFICER: Has anyone?

THE WITNESS: Yes, I believe so.

THE HEARING OFFICER: Mr. Foster?

THE WITNESS: Yes.

THE HEARING OFFICER: All right.

BY MS. NICHOLS:

Q. In -- you have physically examined the west branch of the Ausable, correct?

A. I have, yes.

Q. Did anyone have occasion to tell you what kind of a trout stream it was in terms of its general quality?

THE HEARING OFFICER: I'm going to have to sustain an objection to any more discussions with reference to water quality as they bear upon the aquatic habitat for aquatic animals and plants in view of counsel's indication that this is in the province of Dr. Reinhardt.

MS. NICHOLS: Mr. Hearing Officer, the area that I desire to explore, and I suppose perhaps I should at this time make it in the form of an offer of proof, is that out among trout fishermen the west branch of the Ausable is viewed as one of the finest, if not the finest trout stream in this part of the State and, therefore, that siltation problems, sedimentation problems into the west branch of the Ausable may, in fact, have a significant impact upon its quality and

that those considerations we submit as part of the offer of proof should have gone into the determination of whether or not the siltation and the sedimentation as a result of the runoff from the site would have a significant impact upon the quality of the river.

THE HEARING OFFICER: I will accept your offer of proof subject to rebuttal and I will take judicial notice based on the special competence of the Hearing Examiner, with reference to the effects of siltation on trout streams and the reproduction of trout in fast moving waters. However, the witness here is not qualified to deal with effects on living creatures from siltation and is only competent to talk about silt itself.

MS. NICHOLS: There's only -- at this point, Mr. Hearing Officer, I'm only interested in silt.

THE HEARING OFFICER: O.K. With that understanding --

MR. KAFIN: Just to clarify, you see that the division of responsibility -- this is hydrology -- deals with the water flow. When it

comes to sedimentation and siltation, that's our soils man. There is a further distinction in qualification.

MS. NICHOLS: Mr. Kafin, this isn't one of those jam tomorrow, jam yesterday but never jam today routines, is it?

MR. KAFIN: You'll have your opportunity to ask Mr. Foster these questions.

THE HEARING OFFICER: Counselor -- counselors, you cannot separate hydrology, stream hydrology in the civil engineering-hydraulics sense from siltation and erosion in the geology-hydrologic sense.

MR. KAFIN: I can solve all this. Can we swear Mr. Foster and we'll have them both sit there.

THE HEARING OFFICER: Yes. You got Mr. Foster here.

MR. KAFIN: Let's swear him in.

THE HEARING OFFICER: Let's swear him in.

MR. KAFIN: And he can answer the questions as they come.

THE HEARING OFFICER: Mr. Foster, do you have any objection to testifying under oath?

MR. FOSTER: No.

THE HEARING OFFICER: Will you raise your right hand?

RICHARD FOSTER,

called as a witness for and in behalf of the project sponsor, having been first duly sworn, was examined and testified as follows:

THE HEARING OFFICER: All right, sit down and please give your name and address to the Hearing Reporter for the record.

MR. FOSTER: My name is Richard Foster. I live at 17 Mill Road in Westborough, Massachusetts. That's B-O-R-O-U-G-H.

THE HEARING OFFICER: And--- B-O-R-O-U-G-H. That means there's a spelling in the exhibit which we will correct.

Mr. Foster, I'm going to show you exhibit designated 761119:60 purporting to be your resume, biography and curriculum vita and ask you if that's substantially accurate and fairly and